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DENR POLICY TECHNICAL WORKING GROUP
Notice of PTWG Meeting No. 2023-04

FOR/TO: Director, Legal Affairs Service (Vice- Chairperson, PTWG)
Assistant Director, Biodiversity Management Bureau
Assistant Director, Ecosystems Research and Development Bureau
Assistant Director, Environmental Management Bureau
Assistant Director, Forest Management Bureau
Assistant Director, Land Management Bureau
Assistant Director, Mines and Geosciences Bureau
Representative, Office of the Head Executive Assistant
Representative, Office of the Supervising Undersecretary for Strategic Communications and Chief of Staff
Representative, Office of the Undersecretary for Legal and Administration
Representative, Office of the Undersecretary for Finance, Information Systems and Climate Change
Representative, Office of the Undersecretary Policy, Planning and International Affairs
Representative, Office of the Undersecretary for Field Operations (FO) - Luzon, Visayas and Environment
Representative, Office of the Undersecretary for FO - Mindanao
Representative, Office of the Undersecretary for Organizational Transformation and Human Resources
Representative, Office of the Undersecretary for Special Concerns and Legislative Affairs
Representative, Office of the Undersecretary for Integrated Environmental Science
Representative, Office of the Assistant Secretary for Policy, Planning and Foreign-Assisted and Special Projects
Representative, Office of the Assistant Secretary for Enforcement, Solid Waste Management and Local Government Units Concerns
Representative, Office of the Assistant Secretary for Legal Affairs
Representative, Office of the Assistant Secretary for FO - Luzon and Visayas
Representative, Office of the Assistant Secretary for FO - Eastern Mindanao
Representative, Office of the Assistant Secretary for FO - Western Mindanao
Representative, Office of the Assistant Secretary for Finance, Information Systems and Mining Concerns
Representative, Office of the Assistant Secretary for Human Resources, Strategic Communication and Sectoral Initiatives
Representative, Office of the Assistant Secretary, Office of the Undersecretary for Integrated Environmental Science

MEMO NO. 2023 - 277

402 - a

Representative, Legal Affairs Services
Representative, Climate Change Service
Representative, Strategic Communication and Initiatives Service
Representative, Financial Management Service
Representative, Internal Audit Service
Representative, Foreign-Assisted and Special Projects Service
Representative, River Basin Control Office
Representative, Legislative Liaison Office
Chief, PPS- Policy Studies Division
Technical Staff, PPS-Planning and Programming Division
Technical Staff , PPS- Policy Studies Division
PTWG Secretariat

FROM: The OIC Director, Policy and Planning Service

DATE/TIME: **12 April 2023 (Wednesday) / 9:30 AM (PST)**

RESOURCE PERSONS: For. Ma. Teresa G. Aquino (FMB)
FMB Technical Staff

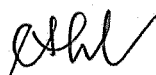
VENUE: **Virtual Meeting via Zoom**

Meeting ID: 469 574 5952

AGENDA:

Revised Draft DENR Administrative Order (DAO) entitled "Guidelines in the Conduct of Inventory and Assessment of Graduated National Greening Program (NGP) Plantations by Third Party Evaluators"

Note: Please log in to your Zoom Account at least 10 minutes before the meeting for us to give time renaming each participants using this format (Office_complete name) in the waiting room, for monitoring purposes.


CHERYL LOISE T. LEAL

Draft DAO re: Guidelines in the Conduct of Inventory and Assessment of Graduated NGP Plantations by Third Party Evaluators

Original Provisions as submitted dated 21 March 2023 (version3)	Comments/ Agreements & Ways Forward during PTWG 2023-03 dated 29 March 2023 (version 4)	Revisions after PTWG, submitted dated 04 April 2023 (version 5)
<p>Title: Guidelines in the Conduct of Inventory and Assessment of Graduated National Greening Program (NGP) Plantations by Third- Party</p>	<ul style="list-style-type: none"> • Use the word “graduated” as it is term already used at the DENR Field Offices. Considerations of providing details of the use of word under the section of Definition of Terms. • The title of the draft DAO was adopted and seconded. 	<p>No changes made as per agreement during the PTWG meeting.</p>
<p>Preambular Statement</p> <p>Pursuant to Presidential Decree No. 705, as amended, otherwise known as the "Revised Forestry Code of the Philippines", Republic Act No. 9184 otherwise known as the Government Procurement Reform Act, Executive Order (E.O.) No. 192, Series of 1987 or the "Reorganization Act of the DENR", Executive Order (E.O.) No. 26, Series of 2011, entitled "Declaring an Interdepartmental Convergence Initiative for the National Greening Program," and E.O. No. 193, Series of 2015, entitled, "Expanding the Coverage of the National Greening Program ", the following are the guidelines governing the conduct of inventory and assessment of Graduated National Greening Program (NGP) Plantations by a third-party evaluator.</p>	<ul style="list-style-type: none"> • Organized the enumeration of laws from PD, Executive Order (EO), and Republic Act (RA). • Paraphrase the last sentence into “the guidelines governing the conduct of inventory and assessment of Graduated National Greening Program (NGP) Plantations by a third-party evaluator are as follows:” • Considering the changes made as per inputs of the PTWG members, the provisions on the preambular statement were adopted and seconded. 	<p>Restated as:</p> <p>Pursuant to Executive Order (E.O.) No. 192, Series of 1987 or the “Reorganization Act of the DENR”, Presidential Decree No. 705, as amended, otherwise known as the "Revised Forestry Code of the Philippines", Executive Order (E.O.) No. 26, Series of 2011, entitled “Declaring an Interdepartmental Convergence Initiative for the National Greening Program,” and E.O. No. 193, Series of 2015, entitled, “Expanding the Coverage of the National Greening Program ", Republic Act No. 9184 otherwise known as the Government Procurement Reform Act, the guidelines governing the conduct of inventory and assessment of Graduated National Greening Program (NGP) Plantations by a third-party evaluator are as follows:</p>

Draft DAO re: Guidelines in the Conduct of Inventory and Assessment of Graduated NGP Plantations by Third Party Evaluators

<p>SECTION 1. Basic Policy. It is the policy of the State to protect and advance a balanced and healthy ecology in accordance with the rhythm and harmony of nature.</p>	<p>Having no comment from the PTWG, the Basic Policy was adopted.</p>	<p>No changes made as per agreement during the PTWG meeting.</p>
<p>SECTION 2. Scope. This Order shall cover the conduct of inventory and assessment of graduated NGP plantation sites that were reported to have been physically completed.</p>	<ul style="list-style-type: none"> • Insert "<i>funded under the General Appropriations Act</i>" after the phrase plantation sites. • Considering the changes made as per inputs of the PTWG members, the provisions under the section of scope was adopted and seconded. 	<p>Revised version: This Order shall cover the conduct of inventory and assessment of graduated NGP plantation sites funded under the General Appropriations Act, that were reported to have been physically completed.</p>
<p>SECTION 3. Objectives</p> <p>The general objective of this Order is to determine the initial impact of NGP. Specifically, it aims:</p> <ol style="list-style-type: none"> 1. To determine the current stocking density under NGP graduated plantations as well as existing trees, saplings and at least 1-meter regenerants; 2. To determine the initial impact on the socio-economic condition of the POs and their perception of improvement in environmental conditions, and the impression of the POs in the implementation of NGP; and 3. To draw lessons, identify gaps and recommendations for policy enhancement and improved implementation strategies. 	<ul style="list-style-type: none"> • Change the word "initial impact" to "<i>performance of</i>", referring to the suggestion of measuring its output up to the level of 85% survival rate; • Change wordings from "Specifically, it aims" to "<i>Specifically, to</i>", following corrections on the enumerated objectives, deleting "to" at the beginning of each objectives. 	<p>Revised version:</p> <p>SECTION 3. Objectives. The general objective of this Order is to determine the performance of NGP. Specifically, to:</p> <ol style="list-style-type: none"> 1. determine the current stocking density under NGP graduated plantations as well as existing trees, saplings and at least 1-meter regenerants; 2. identify the initial impact on the socio-economic condition of the POs; their perception of the effect of NGP on their environment; their impression of the implementation of NGP; and 3. draw lessons, identify gaps and recommendations for policy enhancement and improved implementation strategies.

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	<ul style="list-style-type: none"> • On item 2, it is suggested, changing “of improvement” to “<i>the effect of NGP</i>”. • Considering the changes made as per inputs of the PTWG members, the provisions under objectives were adopted and seconded. 	
<p>SECTION 4. Definition of Terms</p>		
<p>1. Graduated NGP Plantations- project sites established under the NGP and ENGP with completed contract.</p>	<ul style="list-style-type: none"> • The definition adopted was “<i>refers to at least three (3) years old project sites established, and physically completed under the NGP and ENGP as reported by the DENR Field Offices</i>”. • After lengthy discussions and the changes made as per recommendations of the PTWG members, the definition of Graduated NGP Plantations is hereby adopted and seconded. 	<p>Revised as per agreement of PTWG, likewise, propose adding definition for 3. Forest Inventory.</p> <p>1. Graduated NGP Plantations – refers to at least three (3) years old project sites established, and physically completed under the NGP and ENGP as reported by the DENR field offices.</p>

Draft DAO re: Guidelines in the Conduct of Inventory and Assessment of Graduated NGP Plantations by Third Party Evaluators

<p>2. Third- Party- Evaluator- any Securities and Exchange Commission (SEC) -registered corporations, firms, non-government organizations or civil society organizations engaged in environment or forestry advocacies, as well as State Universities or Colleges (SUCs).</p>	<ul style="list-style-type: none"> • To establish the qualifications for the Third-Party-Evaluators, the definition was preferred to be written as “<i>any juridical person () with technical capability and engaged in environment or forestry advocacies as registered in any appropriate government institutions.</i>” • In consideration with the recommendations of the members, the definition of third-party-evaluators was hereby adopted and seconded, with the condition of supplying the layman’s definition for the juridical person. 	<p>2. Third-Party Evaluator – any juridical person, which in this context and scope of this Order includes, corporations, consultancy firms, associations and State Universities and Colleges with technical capability and engaged in environment or forestry advocacies, as registered in any appropriate government institutions; and</p>
	<p>As an additional term, “<i>stakeholders that are in-situ and direct beneficiaries of NGP</i>” was adopted to be the definition of Key Informant.</p> <p>3. Key Informant- stakeholders that are in-situ and direct beneficiaries of NGP.</p>	<p>3. Key Informant- stakeholders that are in-situ and direct beneficiaries of NGP.</p>

Draft DAO re: Guidelines in the Conduct of Inventory and Assessment of Graduated NGP Plantations by Third Party Evaluators

<p>Section 5. Conduct of Inventory and Assessment of Graduated National Greening Program (NGP) Plantations by Third-Party Evaluators. Third-party evaluator shall be engaged by the Regional Offices or PENROs concerned to conduct inventory and assessment of Graduated NGP Plantations. The third-party evaluator shall conduct field inventory of sample sites, conduct key-informant interviews and gather key lessons related to the graduated NGP plantations.</p> <p>5.1. Qualified Third-party Evaluators. Qualified third-party evaluators shall be limited to associations, corporations, consulting firms, non-government organizations, or civil society organizations engaged in environment or forestry advocacies, as well as State and Private Universities and Colleges. Provided that, partners/contractors/organizations shall only be allowed to act as third-party evaluators of sites that they did not establish. Interested third-party evaluators must possess the minimum requirements set forth by Republic Act (RA) No. 9184 in rendering the services needed, including expertise in forest inventory, project evaluation and assessment, socio-economic evaluation, and Geographic Information System (GIS).</p> <p>5.2. Eligibility Criteria. Aside from the minimum requirements set forth under RA 9184 for rendering services, the third-party evaluator must</p>	<ul style="list-style-type: none"> • The title of the section was suggested to be “<i>Qualifications of Third-Party Evaluators</i>”, as the content of the paragraphs refers thereto”. • The opening paragraph, “<i>Third-Party evaluators xxxx</i>” was moved to the section regarding <i>Mode of Engagement</i>. • Only subsections 5.1 and 5.2 were retained and subsumed as part of Section 5. • On the paragraph of Qualified third-party evaluators, change the phrase “be limited to” to “<i>include but not limited to</i>” in order to provide flexibility for entities who would like to express their interest to join the project. • Add “<i>with technical capabilities</i>” after the phrase civil society organizations. • On the eligibility criteria, the following changes were suggested: • Change the word rendering to “<i>procurement of</i>” and three (3) years to <i>ten (10)</i> years, in consideration with the COVID pandemic time from which there are no activities undertaken due to some restrictions; • On the enumeration of the required expertise, on item 3. It is recommended inserting “<i>impact</i>” 	<p>Revised as:</p> <p>SECTION 5. Qualifications of Third-Party Evaluators. The DENR shall engage Third-Party evaluators to undertake the activities. Qualified third-party evaluators shall include, but not limited to, associations, corporations, consulting firms, non-government organizations, or civil society organizations with technical capabilities and engagement in environment or forestry advocacy, as well as State and Private Universities and Colleges. Provided that, partners/contractors/organizations shall only be allowed to act as third-party evaluators of sites that they did not establish. Interested third-party evaluators must possess the minimum requirements set forth by Republic Act (RA) No. 9184 in rendering the services needed, including expertise in forest inventory, project evaluation and assessment, socio-economic evaluation, and Geographic Information System (GIS).</p> <p>Aside from the minimum requirements set forth under RA No. 9184 for procurement of services, the third-party evaluator must meet the minimum</p>
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meet the minimum qualifications as provided in the Terms of Reference (TOR) and sufficient staff complement. On top of this criterion, the third-party evaluators must have the expertise and/or have undertaken similar projects related to the following for the past three (3) years:

1. Project implementation, management, and supervision of ENR projects;
2. Forest inventory, surveys, and/or assessment of reforestation/afforestation sites, including GIS operations; and
3. Socio-economic surveys of community-based management programs.

As such, the Third-party evaluator shall not be allowed to take on two similar contracts of service simultaneously with DENR. Likewise, the Third-party evaluator has no record of past contract engagements with DENR that were not able to complete the services and deliverables required.

5.3. Mode of Engagement. The Regional Office shall engage third-party evaluators pursuant to Republic Act No. 9184. The Regional Office may opt to delegate the procurement of third-party evaluators to the PENROs. A template for the Memorandum of Agreement and Contract is provided in Annex A. Further, the TOR for the third-party evaluators is provided as Annex B.

assessment study” as this is included in the objectives that is targeted to be achieved.

- On the closing paragraph of section 5, delete the first sentence and add paraphrase the second sentence to *“The Third-party has no record of past contract engagement with DENR that was not completed and outputs not delivered.”*
- Considering the comments and suggestions of the members, the provisions for the Qualifications of Third-Party Evaluators were hereby **adopted and seconded.**

qualifications as provided in the Terms of Reference (TOR). The Third-Party, especially its experts, must meet the educational requirements and must have a sufficient staff complement. Second is that the third-party evaluators must have the expertise and/or have undertaken similar projects related to the following for the past ten (10) years:

1. Project implementation, management, and in supervision of ENR projects;
2. Forest inventory, surveys, and/or assessment of reforestation/afforestation sites, including GIS operations; and
3. Socio-economic surveys and impact assessment studies of community-based management programs.

The Third-party has no record of past contract engagements with DENR that were not completed and outputs not delivered.

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<p>SECTION 6. Responsibilities of the third-party evaluator. The following activities shall be conducted by the third-party evaluators:</p> <p>6.1 Conduct of field inventory and assessment of graduated NGP Plantations</p> <p>6.1.1 Sampling Size Determination. Based on all contracts, all graduated NGP plantations shall be validated through the conduct of inventory.</p> <p>For contracted areas less than one (1) hectare, 100% inventory shall be undertaken.</p> <p>For contracted areas with more than one (1) hectare, number of sample plots, having an area of one (1) hectare per plot shall be determined using the formula below:</p> <p>Number of sample plots = $1 + ((0.05) \times (a-1))$</p> <p>Where: 1 ha being the minimum area to be validated</p> <p>0.05 or the (5%) of the area upon deducting 1 ha</p> <p>a is the area of the NGP contract</p> <p>6.1.2. Random sampling. Sample plots shall be determined using the Grid Index feature and Random Point Selection of GIS software. For reference, an image is shown below showing the Grid Index and Random Point Selection features of GIS software.</p>	<ul style="list-style-type: none"> • Subsection 6.1.1 on the determination of sampling size and 6.1.2. Random Sampling shall form part of the Annexes. • Dir. Vicente B. Tuddao, Jr., OIC Director of the Internal Audit Service was requested by FMB to submit their comments regarding the recommended 30% sampling intensity. • FMB to schedule a small group meeting together with KISS, FMB Statistics Section to discuss the sampling methods. 	<p>Revised as:</p> <p>6.1 Conduct of field inventory and assessment of graduated NGP Plantations</p> <p>6.1.1 Carry out the inventory and fill-up the necessary information (diameter, height among others) using the data capture and observation forms (see Annex C).</p> <p>6.1.2 Take geotagged photos and submit photo layouts for each site assessed. Include the geotagged photo layout as part of the summary results.</p> <p>6.1.3 Integrate, manage, organize, and submit data of all sample plots of the sites inventoried.</p>
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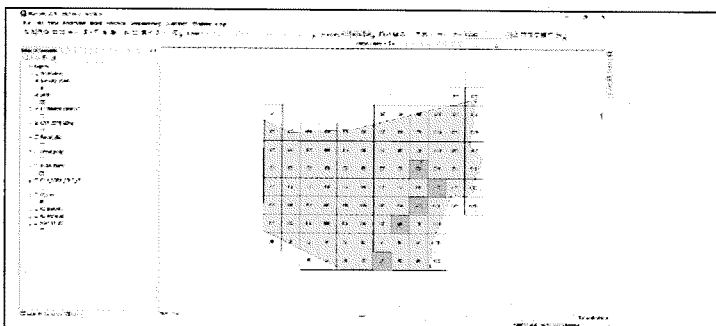


Figure 1. Grid Index and Random Point Selection features

In the plots to be sampled for upland/terrestrial sites, a 100% inventory will be done for both NGP Planted and existing trees/saplings and regenerants. Whereas for mangrove sites, in consideration of the possible overstocked population and to have a more accurate sampling inventory a five (5) 10m x 10m quadrants will be established per plot as representative sample which will be blow-up to compute the estimated average stocking and volume of trees and regenerants per hectare.

In case of contracted areas having more than one (1) site/polygon established, all sites/polygons shall be clustered and merged so that all will be included in the random plot selection.

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Should the randomly selected plot fall under boundaries, or bodies of water, the team shall select any plot adjacent to the said plot.

6.1.3 Carry out the inventory and fill-up the necessary information (diameter, height among others) using the data capture and observation forms (see Annex C).

6.1.4 Take geotagged photos and submit photo layouts for each site assessed. Include the geotagged photo layout as part of the summary results.

6.2. Conduct of Key Informant Interview (KII).

The key informant interview shall be conducted for *in situ* contractors or partners following the prescribed template (see Annex D).

A specific procedure for the conduct of the activities in this section can be referred to in Annex E.

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<p>5.3. Mode of Engagement. The Regional Office shall engage third-party evaluators pursuant to Republic Act No. 9184. The Regional Office may opt to delegate the procurement of third-party evaluators to the PENROs. A template for the Memorandum of Agreement and Contract is provided in Annex A. Further, the TOR for the third-party evaluators is provided as Annex B.</p>	<ul style="list-style-type: none"> • Provide the provisions regarding the procurement of service/contract at the level of Regional Offices and at the PENR Office (transfer of funds). Refer to the Manual of Administrative Matters. • Insert the provisions from the original formulation of section 5, and delete the first sentence. This shall be read as "<i>The third-party evaluator shall conduct field inventory of sample sites, conduct key-informant interviews and gather key lessons related to the graduated NGP plantations.</i>" 	<p>Revised as:</p> <p>SECTION 7. Mode of Engagement. The DENR through its Regional Offices shall engage third-party evaluators pursuant to Republic Act No. 9184. The Regional Offices may delegate the procurement of third-party evaluators to the Provincial Environment and Natural Resources Offices (PENROs) pursuant to the provisions of the Manual of Authorities on Administrative Matters (DAO No. 2014-03). A template for the Memorandum of Agreement and Contract is provided in Annex A. Further, the TOR for the third-party evaluators is provided in Annex B.</p> <p>The third-party evaluator shall conduct field inventory of sample sites, conduct key-informant interviews and gather key lessons related to the graduated NGP plantations.</p>
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SECTION 7. Contract Cost and Schedule of Payment. The cost for the conduct of the activity shall not be more than PhP 4,500 per hectare of sample plots. It shall cover all activities provided for in Section 6 of this Order including incidental expenses.

The payment will be done in tranches, as follows:

- **1st Payment (40%)** – After submission and acceptance of Report covering 50% of target area
- **2nd Payment (40%)** – After submission and acceptance of Report covering the remaining 50% of target area
- **Final Payment (20%)** – After submission, presentation, and acceptance of the final report approved by the concerned DENR office, complete with analysis, findings, highlights of observations and lessons/success stories, and supporting documents such as geo-tagged photographs with timestamp, and shapefiles.

A 10% mobilization fee shall be given upon the signing of the contract and the issuance of the Notice to Proceed by the DENR and the Work Plan by the engaged third-party evaluator, subject to the posting of an irrevocable standby letter of credit issued by them that is acceptable to the First Party and of an amount equal to the

- It was recommended deleting the cost estimates of Php4500 per hectare for the conduct of the activity. Hence, such amount "*shall be recommended by the Director of FMB and approved by the Supervising Undersecretary and shall be included in the Work and Financial Plan*".
- The payment schedule shall be reflected only in the Terms of Reference.
- Delete Schedule of Payment in the Title.
- In consideration with the recommendations of the members, the section on Contract Cost is hereby **adopted** and **seconded**.

Revised as:

SECTION 8. Funding and Contract Cost. The cost for the conduct of the activity shall be recommended by the Director of FMB and approved by the Supervising Undersecretary and shall be included in the Work and Financial Plan. It shall cover all activities provided for in Section 6 of this Order including incidental expenses.

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<p>advance payment. The mobilization fee will be deducted from the 1st Payment.</p> <p>Specific deliverables are stipulated in the terms of reference and contract as Annex A and B which shall form part of this DAO.</p>		
<p>SECTION 8. Responsibilities of DENR. The participation of DENR personnel shall be limited to:</p> <ol style="list-style-type: none"> 1. Providing guidance and assistance on the provision of documents, available digital NGP data, and shapefiles related to the said activity; 2. Assistance in the pre-identification of PO respondents and coordination for the conduct of the KII; 3. Random monitoring of activities of the third-party evaluators; 4. Conduct drone shoots for the selected sites and plots; and 5. Preparation of comparative map layouts of NGP sites assessed and validated. <p>However, no personnel of the Department, whether permanent or contract of service, shall participate in the actual activities as third-party evaluators.</p>	<p>Having no comment from the PTWG, the Basic Policy was adopted.</p>	<p>No changes made as per agreement during the PTWG meeting.</p>

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SECTION 9. Funding. The Department shall allocate funds for the implementation of this Order.

Additional Provision suggested by the proponent:

Section 10. Monitoring, Reporting and Supervision. The activity shall be monitored and supervised by the DENR and its concerned Offices. In particular, the DENR Regional Offices shall monitor the progress of activity and consolidate the reports of the third-party evaluators endorsed by the Provincial Environment and Natural Resource Office (PENRO). The PENROs may create a committee with members from the CENRO to review and evaluate the reports to be submitted by the third-party evaluators. The CENROs shall make sure that all graduated sites to be subjected to the site inventory and assessment are covered by the third-party evaluators.

The Forest Management Bureau (FMB) shall monitor the progress of the delivery of the outputs submitted by the third-party evaluators to the Regions. It shall conduct a subsequent review of the results of the assessment endorsed by the Regions. They shall also provide technical assistance on the process and methodology of the activities and may participate in the review of outputs of the third-party as a form of guidance to the field offices.

The Office of the Undersecretary for Policy, Planning, and International Affairs through the Policy and Planning Service (PPS) shall track the

Draft DAO re: Guidelines in the Conduct of Inventory and Assessment of Graduated NGP Plantations by Third Party Evaluators

		<p>progress as per submitted WFP of the Regional Offices.</p> <p>The Ecosystems and Research and Development Bureau and Biodiversity Management Bureau shall participate in the scheduled review to be called by the FMB.</p> <p>The DENR shall create an oversight committee in the national office to provide overall direction in the conduct and review of the overall results of the Assessment.</p> <p>All Regional Offices shall consolidate and submit monthly progress reports from PENROs/CENROs and the third-party evaluators officially endorsed by the PENROs. These monthly progress reports as well the consolidated results of assessment shall be submitted to the Office of the Undersecretary for Policy, Planning and International Affairs copy furnished the FMB.</p>
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Draft DAO re: Guidelines in the Conduct of Inventory and Assessment of Graduated NGP Plantations by Third Party Evaluators

<p>Terms of Reference</p>	<ul style="list-style-type: none"> • On Section V, the Mode of Payments- First Payment, clarify the 40% less the 10% mobilization computation. Revisit the unit cost, if needed. • On Section VII, the experience should be ten (10) years. • Delete the sentence regarding two similar contracts. • On Section VIII, revisit the unit cost if needed. 	<p>Revised as:</p> <p>1. Scope</p> <p>This shall cover the conduct of inventory and assessment of graduated NGP plantation sites funded under the General Appropriations Act, that were reported to have been physically completed.</p> <p>.III. Objectives</p> <p>The general objective in conducting this activity is to determine the initial impact of NGP. Specifically to:</p> <ol style="list-style-type: none"> 1. determine the current stocking density under NGP graduated plantations as well as existing trees, saplings, and at least 1-meter regenerants; 2. identify the initial impact on the socio-economic condition of the POs; their perception of the effect of NGP on their environment; their impression of the implementation of NGP; and 3. draw lessons, identify gaps, and recommendations for policy enhancement and improved implementation strategies. <p>.IV. Responsibility of the Third-Party Evaluator/Service Provider</p>
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		<p>5. Systematically determine the estimated current NGP Planted Seedlings per species and summarize the following given the prescribed format:</p> <ul style="list-style-type: none">• estimated number of stocking trees, saplings or regenerants per species out of the total sample plot for subject the contracted area• estimated volume per species and per hectare• Species having the highest and lowest estimated number of saplings or regenerants• total number or stocking of trees, saplings, and regenerants in all the plots and its average population per hectare• total stocking of the entire area contracted out of the average stocking per hectare <p>6. After summarizing the data analysis from above, consolidate all the results and analysis of all the contracts following the prescribed table as Annex _____</p>
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Draft DAO re: Guidelines in the Conduct of Inventory and Assessment of Graduated NGP Plantations by Third Party Evaluators

		<p>VI. Qualified Third-party Evaluator/Service Provider</p> <p>Aside from the minimum requirements set forth under RA 9184 for procurement of services, the third-party evaluator/service provider must meet the minimum qualifications as provided in the Terms of Reference (TOR). The Third-Party, especially its experts, must meet the educational requirements and must have a sufficient staff complement. On top of this criterion, the third-party evaluators/service provider must have the expertise and/or have undertaken similar projects related to project implementation and management, forest inventory and assessments, and socio-economic surveys for the past ten (10) years. Below is a summary of criteria and rating system.</p> <p>The Third-party/Service Provider should have no record of past contract engagements with DENR that were not completed and outputs not delivered.</p> <p>The Third-party/Service Provider should garner at least a 60% rating; otherwise, the bidder shall be automatically disqualified.</p>
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Draft DAO re: Guidelines in the Conduct of Inventory and Assessment of Graduated NGP Plantations by Third Party Evaluators

Ways Forward	<ol style="list-style-type: none"> 1. Dir. Vicente B. Tuddao, Jr., OIC Director of the Internal Audit Service was requested by FMB to submit their comments regarding the recommended 30% sampling intensity; 2. FMB to schedule a small group meeting together with KISS, FMB Statistics Section to discuss the sampling methods; and 3. Schedule another round of PTWG Session to finalize the draft DAO. 	<ol style="list-style-type: none"> 1. No submission. 2. Not yet conducted. 3. April 12, 2023
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Note: All text in blue fonts are agreements during the PTWG Meeting and all text in green fonts are suggestions/insertions of FMB, for consideration of the PTWG Members.

Prepared by:

PTWG Secretariat

MEMORANDUM

FOR : The OIC Director
Policy and Planning Service

FROM : The Chief, Forest Resources Conservation Division
In-Charge, Office of the Director

SUBJECT : **DRAFT DENR ADMINISTRATIVE ORDER RE: GUIDELINES IN
THE CONDUCT OF INVENTORY AND ASSESSMENT OF
GRADUATED NATIONAL GREENING PROGRAM (NGP)
PLANTATIONS BY THIRD-PARTY EVALUATORS**

DATE :

This has reference to the draft DENR Administrative Order re: Guidelines in the Conduct of Inventory and Assessment of Graduated National Greening Program (NGP) Plantations by Third-Party Evaluators which was deliberated during PTWG Meeting 2023-03 held last 29 March 2023 via Zoom Meeting.

In this regard, this Office is pleased to endorse the attached draft guidelines incorporating the comments and suggestions of PTWG Members.

FOR YOUR INFORMATION AND CONSIDERATION, PLEASE.

MA. TERESA G. AQUINO



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**DENR Administrative Order
No. 2023-_____**

SUBJECT : GUIDELINES IN THE CONDUCT OF INVENTORY AND ASSESSMENT OF GRADUATED NATIONAL GREENING PROGRAM (NGP) PLANTATIONS BY THIRD-PARTY EVALUATORS

Pursuant to Executive Order (E.O.) No. 192, Series of 1987 or the "Reorganization Act of the DENR", Presidential Decree No. 705, as amended, otherwise known as the "Revised Forestry Code of the Philippines", Executive Order (E.O.) No. 26, Series of 2011, entitled "Declaring an Interdepartmental Convergence Initiative for the National Greening Program," and E.O. No. 193, Series of 2015, entitled, "Expanding the Coverage of the National Greening Program ", Republic Act No. 9184 otherwise known as the Government Procurement Reform Act, the guidelines governing the conduct of inventory and assessment of Graduated National Greening Program (NGP) Plantations by a third-party evaluator are as follows:

SECTION 1. Basic Policy. It is the policy of the State to protect and advance a balanced and healthy ecology in accordance with the rhythm and harmony of nature.

SECTION 2. Scope. This Order shall cover the conduct of inventory and assessment of graduated NGP plantation sites funded under the General Appropriations Act, that were reported to have been physically completed.

SECTION 3. Objectives. The general objective of this Order is to determine the performance of NGP. Specifically, to:

1. determine the current stocking density under NGP graduated plantations as well as existing trees, saplings, and at least 1-meter regenerants;
2. identify the initial impact on the socio-economic condition of the POs; their perception of the effect of NGP on their environment; their impression of the implementation of NGP; and
3. draw lessons, identify gaps, and recommendations for policy enhancement and improved implementation strategies.

SECTION 4. Definition of Terms. For purposes of this Order, the following terms are to be understood and interpreted as follows:

1. Graduated NGP Plantations – refers to at least three (3) years old project sites established, and physically completed under the NGP and ENGP as reported by the DENR field offices
2. Third-Party Evaluator – any juridical person, which in the context and scope of this Order includes, corporations, consultancy firms, associations, and State Universities and Colleges with technical capability and engaged in

environment or forestry advocacy, as registered in any appropriate government institutions.

3. Key Informant – stakeholders that are in situ and direct beneficiaries of NGP

SECTION 5. Qualifications of Third-Party Evaluators

Qualified third-party evaluators shall include, but not limited to, associations, corporations, consulting firms, non-government organizations, or civil society organizations with technical capabilities and engagement in environment or forestry advocacy, as well as State and Private Universities and Colleges. Provided that, partners/contractors/organizations shall only be allowed to act as third-party evaluators of sites that they did not establish. Interested third-party evaluators must possess the minimum requirements set forth by Republic Act (RA) No. 9184 in rendering the services needed, including expertise in forest inventory, project evaluation and assessment, socio-economic evaluation, and Geographic Information System (GIS).

Aside from the minimum requirements set forth under RA 9184 for procurement of services, the third-party evaluator must meet the minimum qualifications as provided in the Terms of Reference (TOR). Moreover, the third-party evaluators must have the expertise and/or have undertaken similar projects related to the following for the past ten (10) years:

1. Project implementation, management, and supervision of ENR projects;
2. Forest inventory, surveys, and/or assessment of reforestation/afforestation sites, including GIS operations; and
3. Socio-economic surveys and impact assessment studies of community-based management programs.

The Third-party has no record of past contract engagements with DENR that were not completed and outputs not delivered.

SECTION 6. Responsibilities of the third-party evaluator. The following activities shall be conducted by the third-party evaluators:

6.1 Conduct of field inventory and assessment of graduated NGP Plantations

6.1.1 Carry out the inventory and fill up the necessary information (diameter, height among others) using the data capture and observation forms (see Annex C).

6.1.2 Take geotagged photos and submit photo layouts for each site assessed. Include the geotagged photo layout as part of the summary results.

6.1.3 Integrate, manage, organize, and submit data of all sample plots of the sites inventoried;

6.2. Conduct of Key Informant Interview (KII). The key informant interview shall be conducted for *in situ* contractors or partners following the prescribed template (see Annex D).

A specific procedure for the conduct of the activities in this section can be referred to in Annex E.

SECTION 7. Mode of Engagement. The DENR through its Regional Offices shall engage third-party evaluators pursuant to Republic Act No. 9184. The Regional Offices may delegate the procurement of third-party evaluators to the Provincial Environment and Natural Resources Offices (PENROs) pursuant to the provisions of the Manual of Authorities on Administrative Matters (DAO No. 2014-03). A template for the Memorandum of Agreement and Contract is provided in Annex A. Further, the TOR for the third-party evaluators is provided in Annex B.

The third-party evaluator shall conduct field inventory of sample sites, conduct key-informant interviews and gather key lessons related to the graduated NGP plantations.

SECTION 8. Funding and Contract Cost. The cost for the conduct of the activity shall be recommended by the Director of FMB and approved by the Supervising Undersecretary and shall be included in the Work and Financial Plan. It shall cover all activities provided for in Section 6 of this Order including incidental expenses.

SECTION 9. Responsibilities of DENR. The participation of DENR personnel shall be limited to:

1. Providing guidance and assistance on the provision of documents, available digital NGP data, and shapefiles related to the said activity;
2. Assistance in the pre-identification of PO respondents and coordination for the conduct of the KII;
3. Random monitoring of activities of the third-party evaluators;
4. Conduct drone shoots for the selected sites and plots; and
5. Preparation of comparative map layouts of NGP sites assessed and validated.

However, no personnel of the Department, whether permanent or contract of service, shall participate in the actual activities as third-party evaluators.

Section 10. Monitoring, Reporting and Supervision. The DENR Regional Offices shall monitor the progress of activity and consolidate the monthly progress reports and final reports of the third-party evaluators endorsed by the Provincial Environment and Natural Resource Office (PENRO). These monthly progress reports as well the consolidated results of assessment shall be submitted to the Office of the Undersecretary for Policy, Planning and International Affairs copy furnished the FMB.

The PENROs may create a committee with members from the CENRO to review and evaluate the reports to be submitted by the third-party evaluators. The CENROs

shall make sure that all graduated sites to be subjected to the site inventory and assessment are covered by the third-party evaluators.

The Forest Management Bureau (FMB), together with the Ecosystems and Research and Development Bureau (ERDB) and Biodiversity Management Bureau (BMB) shall conduct a subsequent review of the results of the assessment endorsed by the Regions. They shall also provide technical assistance on the process and methodology of the activities and may participate in the review of outputs of the third-party as a form of guidance to the field offices.

SECTION 11. Separability Clause. Should any provision or part of this Order be declared unconstitutional, those not affected shall remain in full force and effect.

SECTION 12. Repealing Clause. All other Department circulars, orders, memoranda, and issuances inconsistent herewith shall be amended or repealed accordingly.

SECTION 13. Effectivity Clause. This Order shall take effect after publication in a newspaper of general circulation and upon submission to the Office of the National Administrative Register (ONAR) from the UP Law Center.

MARIA ANTONIA YULO LOYZAGA
Secretary

**ANNEX A: Memorandum of Agreement (MOA) or Contract of Agreement
Template**

ANNEX B: Terms of Reference of the Third-Party Evaluator

ANNEX C: Data Capture and Observation Forms

ANNEX D: Key Informant Interview

**ANNEX E: Specific Procedure for the Conduct of Sampling, Inventory and Key
Informant Interview**

ANNEX A

**CONTRACT OF AGREEMENT
THIRD-PARTY EVALUATION OF GRADUATED NATIONAL GREENING
PROGRAM (NGP) SITES**

KNOW ALL MEN BY THESE PRESENTS:

This **CONTRACT OF AGREEMENT** entered into by and between

The **DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES REGION ____ (OR PENRO OFFICE)**, a government agency created and duly organized pursuant to Executive Order 192, series of 1987, with principal address at _____, represented by its Regional Executive Director (*or PENR Officer*) _____ (**ALL CAPS**), herein referred as **FIRST PARTY**.

-and-

_____, a (*either a Firm/NGO/CSO/SUC*) _____, represented by its (*President/Managing Director/Head*), **MR/MS.** _____, with principal address at _____, duly authorized for this purpose, and herein referred to as **SECOND PARTY**.

WITNESSETH

WHEREAS, the **FIRST PARTY** is the primary agency responsible for the conservation, management, development and sustainable use of the country's environment and natural resources;

WHEREAS, Executive Order (EO) No. 26, s. 2011 established the National Greening Program (NGP) as the country's massive national reforestation program for poverty reduction, food security, biodiversity conservation and climate change mitigation and adaptation, with the **FIRST PARTY** as the lead agency for its implementation, from 2011 to 2016;

WHEREAS, EO No. 193, s. 2015 expanded the implementation of NGP to cover the remaining degraded, denuded and unproductive forestlands, and extended the implementation from 2016 to 2028;

WHEREAS, the **FIRST PARTY** is in need of the services of the **SECOND PARTY** who shall perform inventory and assessment of graduated NGP sites to determine the initial impact of NGP;

WHEREAS, the **SECOND PARTY** has signified its intention, to which the **FIRST PARTY** has accepted, to provide the services needed by the latter;

WHEREAS, the **SECOND PARTY** hereby possesses the qualification, expertise, resources, logistics and competencies required to perform the services needed as described herein;

WHEREAS, the **FIRST PARTY** through the Regional Bids and Awards Committee (RBAC) conducted a public bidding for the Third-Party Evaluation of Graduated National Greening Program (NGP) Sites in accordance with the Republic Act (RA) No. 9184 and its revised Implementing Rules and Regulations (IRR), for which certain terms and conditions were laid out in the bidding documents prepared for the purpose by the RBAC;

WHEREAS, the RBAC through the Resolution No. _____ recommended to the Regional Executive Director (or PENR Officer) for its approval the bid of (**SECOND PARTY's NAME**) for being the highest rated responsive bidder (HRRB);

WHEREAS, in view of the favorable recommendation of the RBAC, the **FIRST PARTY** awarded the corresponding contract to (**SECOND PARTY's NAME**) through Resolution No. _____ which was approved by the Regional Executive Director (or PENRO);

NOW, THEREFORE, for and in consideration of the foregoing premises, the mutual covenants, terms and conditions hereinafter set forth, the parties agree as follows:

SECTION 1. RESPONSIBILITIES OF THE FIRST PARTY. The **FIRST PARTY** shall perform the following functions:

- a. Allocate funds to the **SECOND PARTY** in the amount of _____ chargeable against Operations-Natural Resources Sustainability Managed - Forest Development, Rehabilitation, Maintenance and Protection / NGP Funds for the validation of _____ hectares graduated NGP plantation sites;
- b. Allow and/or facilitate access to NGP sites subject to validation;
- c. Provide technical assistance on the interpretation of DAO No. _____ and other related laws, policies, issuances, and rules and regulations;
- d. Provide support to the **SECOND PARTY** on the provision of documents including shapefiles and drone shots related to the said activity. Provided that drone shots are subject to the availability of manpower, equipment, and other resources.

- e. The **FIRST PARTY** may conduct random monitoring of the activities of the **SECOND PARTY**, provided that no personnel of the **FIRST PARTY**, whether permanent or contract of service, shall participate in the actual activities as third-party evaluators.
- f. Provide assistance on the coordination with implementation partners.

SECTION 2. RESPONSIBILITIES OF THE SECOND PARTY. The **SECOND PARTY** shall perform the following functions:

- a. Conduct inventory and assessment of graduated NGP sites within the concerned Region (or Province) using the methodology and sampling as prescribed by the DENR under DAO No. _____ and its attachments;
- b. Randomly determine sample plots for each selected site with the prescribed sampling, and identify using the GIS-generated shapefiles and grid index mapping procedure;
- c. Locate and determine the boundary of the plot/s and conduct inventory using the respective data capture form and observation form and geotagging;
- d. Determine the current stocking density, estimated volume stem form, health status, etc. of planted seedlings (which may be have grown into trees) as well as existing trees/saplings/regenerants, within the randomly selected NGP sample site/s plots by filling-out the prescribed encoding sheet and data consolidation file;
- e. Consolidate the results of the inventory that represent all the contracted sites in one file;
- f. With the existing spatial data available, utilize the map generated on the subject sampled site and/or drone shots taken by DENR and put it in a prescribed report format;
- g. Observe and record other parameters from the sampled site and its plot/s using the prescribed observation form;
- h. Conduct key informant interview of at least three (3) *in-situ* members among the POs/barangay or local beneficiaries/organizations/institutions identified, subject to the availability of such interviewees;
- i. Facilitate the conduct of one-time and blended focus group discussion with the selected PO representatives to validate and substantiate the initial results of KIII; and

- j. Perform other related tasks deemed necessary to carry out aforementioned activities.

SECTION 3. DURATION AND SCHEDULE OF PAYMENT. The Contract of Agreement shall have a duration of six (6) months upon issuance of the Notice to Proceed (NTP) with the following mode of payment, deliverables, corresponding percentage payment and reporting requirements to carry out the activities or services needed.

MODE PAYMENT/ GENERAL DELIVERABLE	PERCENTAGE PAYMENT AND AMOUNT (Inclusive of Tax)	SPECIFIC DELIVERABLE
<p>1st Payment – After submission, acceptance and approval of Report by the concerned DENR Office covering 50% of inventoried target sampled plots and encoded data KII respondents</p>	<p>40% less the 10% mobilization (input the net amount here)</p>	<p>Report covering at least 50% of the target samples to be submitted 60 calendar days from the date of issuance of Notice to Proceed:</p> <ul style="list-style-type: none"> ● Letter of submission of the 2nd Party ● Pencil-filled-up data captured (hard copy) ● Print-copy of individual results of the inventoried contracted area out the inventoried sampled plot/s in MS word file containing the data analysis tables, and sample geotagged photos (Annex B) ● Shapefile of the validated sites and plots established ● Pencil filled-up KII results (hard copy) ● Encoded data of key informant interview of <i>in-situ</i> POs and local beneficiaries ● Digital copy of geotagged photos, all encoded and analyzed data, including scanned copies of filled-up data capture forms, results on the contracted area out of the inventoried the sampled plots in MS Word files, and KII encoded data in MS Excel.

MODE PAYMENT/ GENERAL DELIVERABLE	PERCENTAGE PAYMENT AND AMOUNT (Inclusive of Tax)	SPECIFIC DELIVERABLE
		Payment shall be made subject to the submission, presentation, and acceptance of reports/results of the inventory and assessment to the First Party.
<p>2nd Payment – After submission, acceptance and approval of Repor by the concerned DENR Office covering the remaining 50% of the inventoried sampled plots and encoded data from KII respondents</p>	<p>40% (input the net amount)</p>	<p>Report covering at least 50% of the target samples to be submitted 60 calendar days from the expected date of submission of the above 1st deliverable:</p> <ul style="list-style-type: none"> ● Letter of submission of the 2nd Party ● Pencil filled-up data capture form (hard-copy) ● Print-copy of individual results of the inventoried contracted area out the inventoried sampled plot/s in MS word file containing the data analysis tables, sample geotagged photos (Annex B) ● Shapefile of the validated sites and plots established ● Pencil filled-up KII results (hard copy) ● Encoded data of key informant interview of <i>in-situ</i> POs and local beneficiaries ● Digital copy of geotagged photos, all encoded and analyzed data, including scanned copies of filled-up data capture forms; results of all the inventoried contracted areas out of the results of the sampled plots in MS Word files, and KII encoded data in MS Excel.

MODE PAYMENT/ GENERAL DELIVERABLE	PERCENTAGE PAYMENT AND AMOUNT (Inclusive of Tax)	SPECIFIC DELIVERABLE
		Payment shall be made subject to submission, presentation, and acceptance of reports/results of the inventory and assessment to the DENR.
<p>Final Payment – After submission, presentation, acceptance and approval of the final report by the concerned DENR Office</p>	<p>20% (input the amount here)</p>	<p>The Final Report shall be submitted 60 calendar days from the expected date of submission of the above 2nd deliverable:</p> <p>The final report includes hard and soft copies containing the background, methodology, results, and discussion on the inventory, assessment and KII complete with:</p> <ul style="list-style-type: none"> ● graphs ● maps (picture and shapefile formats) ● summary data tables ● statistics ● analysis ● findings ● highlights of observations and lessons/success stories ● supporting documents with timestamp ● Printed packaged of Individual results of the inventoried contracted area out the of sample plot inventory (Annex B) ● data analysis of each contract out of the sampled sites/plots ● Consolidated electronic file of the data encoded, analyzed, in MS Excel ● Report/s in MS Word and PDF formats

MODE PAYMENT/ GENERAL DELIVERABLE	PERCENTAGE PAYMENT AND AMOUNT (Inclusive of Tax)	SPECIFIC DELIVERABLE
		Payment shall be made subject to submission, presentation, and acceptance of reports/results of the inventory and assessment to the DENR.

A 10% mobilization fee shall be given upon the signing of the contract and the issuance of the Notice to Proceed by the First Party and the Work Plan by the Second Party, subject to the posting of an irrevocable standby letter of credit issued by them that is acceptable to the First Party and of an amount equal to the advance payment. The mobilization fee will be deducted from the 1st Payment.

SECTION 5. SPECIAL PROVISIONS

- a. All data encoded, analyzed, maps, geotagged photos and reports made by the **SECOND PARTY** while performing and after the Services have been rendered shall be the sole and exclusive property of the **FIRST PARTY**. The **SECOND PARTY** shall not use the data, shapefiles, reports, and specifics in the deliverables for purposes unrelated to the Services and shall not make recommendations as a result of the services without the prior and written approval of the **FIRST PARTY**;
- b. It is understood that the **SECOND PARTY** shall use their equipment, gadgets, computer/laptop, GIS Software, Vehicles, and other logistics to render the services, and activities and produce the agreed deliverables and reports;
- c. The **SECOND PARTY** shall report immediately to the **FIRST PARTY** any accident involving personal injury or property damage during the Term of Engagement. The **SECOND PARTY** shall also report to the **FIRST PARTY** immediately any circumstances which might hinder or prejudice the performance of the Services.

SECTION 7. MODIFICATIONS OR VARIATIONS. Any modification and variation of the terms and conditions, including the modification or variation of the scope of services and deliverables in this contract, shall be made by written agreement between the **TWO (2) PARTIES**.

SECTION 8. PENALTY CLAUSE. Any breach/violation constituting the conduct of the above-mentioned undertaking shall be subject to the provisions enshrined in RA 9285 otherwise known as "Alternative Dispute Resolution Act of 2004".

Liquidated damages shall be imposed pursuant to Section 68 of the Revised 2016 IRR of RA 9184 in case of delay in the performance of the contract, which shall be in the

amount of at least equal to one-tenth of one percent (0.001) of the cost of the unperformed portion for every day of delay. Once the cumulative amount of liquidated damages reaches 10% of the total amount of this contract, the **FIRST PARTY** may rescind this contract without prejudice to other courses of action and remedies available under the circumstances.

SECTION 10. TERMINATION CLAUSE. This Contract Agreement may be terminated by either party for any reason as may be deemed appropriate before the expiration of the period, giving the other party prior written notice not less than fifteen (15) days before the intended day of termination.

IN WITNESS WHEREOF, both parties have hereunto affixed their signatures this ____ day of ____, 2023 at _____.

Department of Environment and Natural Resources: _____:

Regional Executive Director (or PENRO)

President/Managing Director/Head

Signed in the presence of:

Republic of the Philippines) S.S.
Quezon City, Metro Manila)

ACKNOWLEDGEMENT

In _____, Philippines, on this _____ day of _____,
2020 personally appeared before me.

<u>Name</u>	<u>Government Issued Identification Card</u>	<u>Date/Place Issued</u>
_____	_____	

_____	_____	

Known to me to be the same persons who executed the foregoing instrument and they acknowledged to me that the same is their free will and deed. In witness whereof I set my hand and affixed my notarial seal at the place and on the date first herein above mentioned.

This **Agreement**, consisting of three (3) pages including this page wherein this acknowledgement is written, has been signed by the parties and their instrumental witnesses on each and every page thereof.

Notary Public

Doc No. : _____
Page No.: _____
Book No.: _____
Series of: 2023

ANNEX B

TERMS OF REFERENCE FOR THE SERVICE PROVIDER FOR THE THIRD-PARTY INVENTORY OF PLANTATIONS AND KEY INFORMANT INTERVIEW FOR THE ASSESSMENT OF NGP GRADUATED SITES

I. Background

The issuance of Executive Order (EO) No. 26 in 2011 mandated the Department of Environment and Natural Resources (DENR) to spearhead the implementation of the National Greening Program (NGP) in partnership with other national government agencies, academe, civil society organizations, and other stakeholders. The NGP aims to contribute to addressing national concerns of *poverty reduction, food security, environmental stability, biodiversity conservation, and climate change mitigation and adaptation.*

The program targeted the rehabilitation of 1.5 million hectares of degraded forest lands from 2011 to 2016. By the end of 2016, a total of 1.6 million hectares had been planted. This prompted the government to issue EO No. 193 expanding the coverage of the NGP to cover all remaining unproductive, denuded, and degraded forests with its period of implementation also extended from CY 2016 to 2028.

To promote transparency and to assess the current status of the graduated NGP plantation sites established by the different stakeholders, including Local Government Units (LGUs), other government agencies, the academe, different People's Organizations (POs), families, and the private sector, there is a need to have an assessment of the said sites by validators outside the implementing parties of the NGP.

Aside from the updating of the status of such sites, this activity also aims to respond to some of the Commission of Audit's findings and to assess the initial outcome of the implementation of NGP. As such, the DENR shall undertake and engage the services of a Third-party Evaluator starting this 2023 onwards.

II. Scope

This shall cover the conduct of inventory and assessment of graduated NGP plantation sites funded under the General Appropriations Act, that were reported to have been physically completed.

III. Objectives

The general objective in conducting this activity is to determine the initial impact of NGP. Specifically to:

1. determine the current stocking density under NGP graduated plantations as well as existing trees, saplings, and at least 1-meter regenerants;
2. identify the initial impact on the socio-economic condition of the POs; their perception of the effect of NGP on their environment; their impression of the implementation of NGP; and
3. draw lessons, identify gaps, and recommendations for policy enhancement and improved implementation strategies.

IV. Responsibility of the Third-Party Evaluator/Service Provider

1. Conduct inventory and assessment of graduated NGP sites within the concerned Region (or Province) using the methodology and sampling as prescribed by the DENR.

Based on all contracts, all graduated NGP plantations shall be validated.

For contracted areas of less than 1 ha, 100% inventory shall be undertaken. In the case of contracted areas with more than one (1) hectare, the number of sample plots shall be determined using the formula below:

$$\text{Number of sample plots} = 1 + ((0.05) \times (a-1))$$

Where: **1** ha being the minimum area to be validated
0.05 or the (5%) of the area upon deducting 1 ha
a is the NGP contracted area

2. Randomly determine sample plots for each selected site with the prescribed sampling and identify using the GIS-generated shapefiles and grid index mapping procedure;
3. Locate and determine the boundary of the plots and conduct inventory using the respective data capture form and observation form and geotagging;
4. Determine the current stocking density, estimated volume stem form, health status, etc. of planted seedlings (which may have grown into trees) as well as existing trees/saplings/regenerants, within the randomly selected NGP sample site/s plots by filling-out the prescribed encoding and summary sheet file;
5. Systematically determine the estimated current NGP Planted Seedlings per species and summarize the following given the prescribed format:

- estimated number of stocking trees, saplings or regenerants per species out of the total sample plot for subject the contracted area
 - estimated volume per species and per hectare
 - Species having the highest and lowest estimated number of saplings or regenerants
 - total number or stocking of trees, saplings, and regenerants in all the plots and its average population per hectare
 - total stocking of the entire area contracted out of the average stocking per hectare
6. After summarizing the data analysis from above, consolidate all the results and analysis of all the contracts following the prescribed table as Annex _____
 7. With the existing spatial data available, utilize the map generated on the subject sampled site and/or drone shots taken by DENR and put it in a prescribed report format;
 8. Prepare the land cover map of the subject sites/polygon and kmz file of the subject area. The 2010 land cover map will be used for 2011-2013 sites while the land cover map of 2015 will be used for succeeding years. To compare the two time periods of the two images, and to determine whether or not there will be changes in cover, a land cover map from 2020 or the most recent land cover map for succeeding years will be used. For each site sampled, put the screenshots of the two land cover maps in a prescribed report format;
 9. Observe and record other parameters from the sampled site and its plot/s using the prescribed observation form;
 10. Conduct key informant interviews of at least three (3) in-situ members among the POs/barangay or local beneficiaries/organizations/institutions identified, subject to the availability of such interviewees;
 11. Facilitate the conduct of one-time and blended focus group discussion with the selected PO representatives to validate and substantiate the initial results of KIII; and
 12. Perform other related tasks deemed necessary to carry out aforementioned activities.

V. Schedule of Payment and Outputs of the Services

The cost for the conduct of the activity shall not be more than Php 4,500 per hectare of sample plots and shall cover all activities.

MODE PAYMENT/ GENERAL DELIVERABLE	PERCENTAGE PAYMENT AND AMOUNT (Inclusive of Tax)	SPECIFIC DELIVERABLE
<p>1st Payment – After submission, acceptance and approval of Report by the concerned DENR Office covering 50% of inventoried target sampled plots and encoded data KII respondents</p>	<p>40% less the 10% mobilization (input the net amount here)</p>	<p>Report covering at least 50% of the target samples to be submitted 60 calendar days from the date of issuance of Notice to Proceed:</p> <ul style="list-style-type: none"> ● Letter of submission of the 2nd Party ● Pencil-filled-up data captured (hard copy) ● Print-copy of individual results of the inventoried contracted area out the inventoried sampled plot/s in MS word file containing the data analysis tables, and sample geotagged photos (Annex B) ● Shapefile of the validated sites and plots established ● Pencil filled-up KII results (hard copy) ● Encoded data of key informant interview of <i>in-situ</i> POs and local beneficiaries ● Digital copy of geotagged photos, all encoded and analyzed data, including scanned copies of filled-up data capture forms, results on the contracted area out of the inventoried the sampled plots in MS Word files, and KII encoded data in MS Excel. <p>Payment shall be made subject to the submission, presentation, and acceptance of reports/results of the inventory and assessment to the First Party.</p>

MODE PAYMENT/ GENERAL DELIVERABLE	PERCENTAGE PAYMENT AND AMOUNT (Inclusive of Tax)	SPECIFIC DELIVERABLE
<p>2nd Payment – After submission, acceptance and approval of Report by the concerned DENR Office covering the remaining 50% of the inventoried sampled plots and encoded data from KII respondents</p>	<p>40% (input the net amount)</p>	<p>Report covering at least 50% of the target samples to be submitted 60 calendar days from the expected date of submission of the above 1st deliverable:</p> <ul style="list-style-type: none"> ● Letter of submission of the 2nd Party ● Pencil filled-up data capture form (hard-copy) ● Print-copy of individual results of the inventoried contracted area out the inventoried sampled plot/s in MS word file containing the data analysis tables, sample geotagged photos (Annex B) ● Shapefile of the validated sites and plots established ● Pencil filled-up KII results (hard copy) ● Encoded data of key informant interview of <i>in-situ</i> POs and local beneficiaries ● Digital copy of geotagged photos, all encoded and analyzed data, including scanned copies of filled-up data capture forms; results of all the inventoried contracted areas out of the results of the sampled plots in MS Word files, and KII encoded data in MS Excel. <p>Payment shall be made subject to submission, presentation, and acceptance of reports/results of the inventory and assessment to the DENR.</p>
<p>Final Payment – After submission, presentation,</p>	<p>20%</p>	<p>The Final Report shall be submitted 60 calendar days from</p>

MODE PAYMENT/ GENERAL DELIVERABLE	PERCENTAGE PAYMENT AND AMOUNT (Inclusive of Tax)	SPECIFIC DELIVERABLE
acceptance and approval of the final report by the concerned DENR Office	(input the amount here)	<p>the expected date of submission of the above 2nd deliverable:</p> <p>The final report includes hard and soft copies containing the background, methodology, results, and discussion on the inventory, assessment and KII complete with:</p> <ul style="list-style-type: none"> ● graphs ● maps (picture and shapefile formats) ● summary data tables ● statistics ● analysis ● findings ● highlights of observations and lessons/success stories ● supporting documents with timestamp ● Printed packaged of Individual results of the inventoried contracted area out the of sample plot inventory (Annex B) ● data analysis of each contract out of the sampled sites/plots ● Consolidated electronic file of the data encoded, analyzed, in MS Excel ● Report/s in MS Word and PDF formats <p>Payment shall be made subject to submission, presentation, and acceptance of reports/results of the inventory and assessment to the DENR.</p>

A 10% mobilization fee shall be given within fifteen (15) working days after the signing of the contract and the issuance of the Notice to Proceed by the First

Party and the Work Plan by the Second Party, subject to the posting of an irrevocable standby letter of credit issued by them that is acceptable to the First Party and of an amount equal to the advance payment. The mobilization fee will be deducted from the 1st Payment.

VI. Qualified Third-party Evaluator/Service Provider

Qualified third-party evaluators/service providers include, but not limited to, associations, corporations, consulting firms, non-government organizations, or civil society organizations with technical capabilities and engagement in environment or forestry advocacy, as well as State and Private Universities and Colleges. Partners/contractors/organizations are only allowed to act as third-party evaluators/service providers of sites that they did not establish. Interested third-party evaluators/service providers must possess the minimum requirements set forth by Republic Act (RA) No. 9184 in rendering the services needed, including expertise in forest inventory, project evaluation and assessment, socio-economic evaluation, and Geographic Information System (GIS).

VII. Qualification of the Third-Party Evaluator/Service Provider

Aside from the minimum requirements set forth under RA 9184 for procurement of services, the third-party evaluator/service provider must meet the minimum qualifications as provided in the Terms of Reference (TOR). The Third-Party, especially its experts, must meet the educational requirements and must have a sufficient staff complement. **On top of this criterion**, the third-party evaluators/service provider must have the expertise and/or have undertaken similar projects related to project implementation and management, forest inventory and assessments, and socio-economic surveys for the past ten (10) years. Below is a summary of criteria and rating system.

1. Educational background and staff complement (20%)
 - a) Team Leader is a forestry professional and at least 70% of the staff are foresters (15%-20%)
 - b) Team Leader is a forestry professional and at least 50% of the staff are foresters (10%-14%)
2. Project implementation, management, and supervision of ENR projects (25%);
 - a) At least two projects undertaken (20% to 25%)
 - b) One project undertaken (15% to 19%)
3. Forest inventory, surveys, and/or assessment of reforestation/afforestation sites, including GIS operations (30%) and
 - a) Engaged in at least two similar/related contracts or study projects (25% to 30%)
 - b) Engaged in one similar/related contract or study projects (20% to 24%)
4. Socio-economic surveys of community-based management programs (25%).

- a) Engaged in at least two similar/related contracts or study projects (20% to 25%)
- b) Engaged in one similar/related contract or study projects (15% to 19%)

The Third-party/Service Provider should have **no record of past contract engagements with DENR that were not completed and outputs not delivered.**

The Third-party/Service Provider should garner at least a 60% rating; otherwise, the bidder shall be automatically disqualified.

VIII. **Duration and Unit Contract Cost**

The contract shall be implemented/completed for a duration of six **(6) months** from the time of the issuance of the Notice to Proceed. The unit contract cost is **PhP 4,500 per hectare** inclusive of the key informant interviews and incidental expenses to render such service and deliver specific outputs. However, the cost of leveling off meetings/orientations and debriefing will be charged to DENR Project Management and Supervision, and hence shall not be borne by the Second Party.

IX. **Special Provisions**

All data encoded and analyzed, maps generated, geotagged photos taken, and reports made by the Service Provider while performing and after the Services have been rendered shall be the sole and exclusive property of the DENR. The Service Provider shall not use the data, shapefiles, reports, and specifics in the deliverables for purposes unrelated to the Services and shall not make recommendations as a result of the services without the prior and written approval of the DENR.

It is understood that the Service Provider shall use their equipment, gadgets, computer/laptop, GIS Software, Vehicles and other logistic to render the services and activities, and produce the agreed deliverables and reports;

The Service Provider shall report immediately to the DENR any accident involving personal injury or property damage during the Term of Engagement. The Service Provider shall also report to the DENR immediately any circumstances which might hinder or prejudice performance of the Services.

X. **Penalty Clause**

Any breach/violation constituting the conduct of the activities under this shall be subject to the provisions enshrined in RA 9285 otherwise known as "Alternative Dispute Resolution Act of 2004".

Liquidated damages shall be imposed pursuant to Section 68 of the Revised 2016 IRR of RA 9184 in case of delay of the performance of contract which shall be in the amount of at least equal to one-tenth of one percent (0.001) of the cost of the unperformed portion for every day of delay. Once the cumulative amount of liquidated damages reaches 10% of the total amount of this contract, the DENR may rescind this contract without prejudice to other courses of action and remedies available under the circumstances.

XI. Modifications or Variations

Any modification and variation of the terms and conditions including the modification or variation of the scope of services and deliverables shall be made by written agreement between the service provider and the DENR.

Table : Summary of Health Status for all Plots in the _____ hectare Polygon

SPECIES	TOTAL NO. OF TREES PER SPECIES	HEALTH STATUS		HEALTH STATUS	
		No. of Healthy	No. of Not Healthy	% Healthy	% Not Healthy
An-an	18	18	-	100%	0%
Auri	24	24	-	100%	0%
Badlan	15	15	-	100%	0%
Batino	66	66	-	100%	0%
Betel	4	4	-	100%	0%
Breadfruit	2	2	-	100%	0%
Duhet	2	2	-	100%	0%
Indian mango	1	1	-	100%	0%
Langka	17	17	-	100%	0%
Lanzones	1	1	-	100%	0%
Mahogany	28	28	-	100%	0%
Makopa	1	1	-	100%	0%
Malapapaya	49	49	-	100%	0%
Manga	6	6	-	100%	0%
Mangium	12	11	1	92%	8%
Marang	5	5	-	100%	0%
Molave	4	4	-	100%	0%
Mountain Agohe	126	124	2	98%	2%
Narra	30	28	2	93%	7%
Putian	1	1	-	100%	0%
Rambutan	12	12	-	100%	0%
Santol	18	18	-	100%	0%
Total/Average	442	437	5	99%	1%

SUMMARY OF OBSERVATIONS OF SAMPLED PLOT

- 1 Presence or Absence of Manager/Claimant: Present (Name: _____) Absent
- 2 Current Average Spacing (___M X ___M)
- 3 What is/are the dominant (tall) planted trees species: _____
- 4 General Description of Stem Form: Majority are vertically straight, round and lignified Majority are not vertically straight (crooked or forked)
- 5 Presence or Absence of Other Floral Species Absence Present, If present, enumerate the species: _____
- 6 Presence or Absence of Faunal/Animal Wildlife Absence Present, If present, enumerate the species: _____
- 7 Incidence of pest and diseases: None There is/are, specify: _____

Species	Specific Pest/Signs/Symptoms	Severity (Severe, Not Severe)
	<i>Small and irregular, pale green, corky looking, irregular, and sometimes</i>	<i>Not severe</i>

- 8 Damage observed and its possible causes: None There is, specify the cause: _____
- 9 Was there any replanting done after the contract period? Yes No No Info
- 10 Recommendation whether the plantation needs silvicultural treatment (e.g., thinning, removal of vines)

- 11 Recommended major land-use For Production For Protection
- 12 Feedback from the POs/Caretaker, if any

Note: Use the appropriate pro-forma for each component

I. Maps and Photos of Sites Assessed and Inventoried

Site 1

Unique Code: _____

Land Cover Comparison

Landcover Map of 2010	Landcover Map of 2020

Google Map (Before and Current)

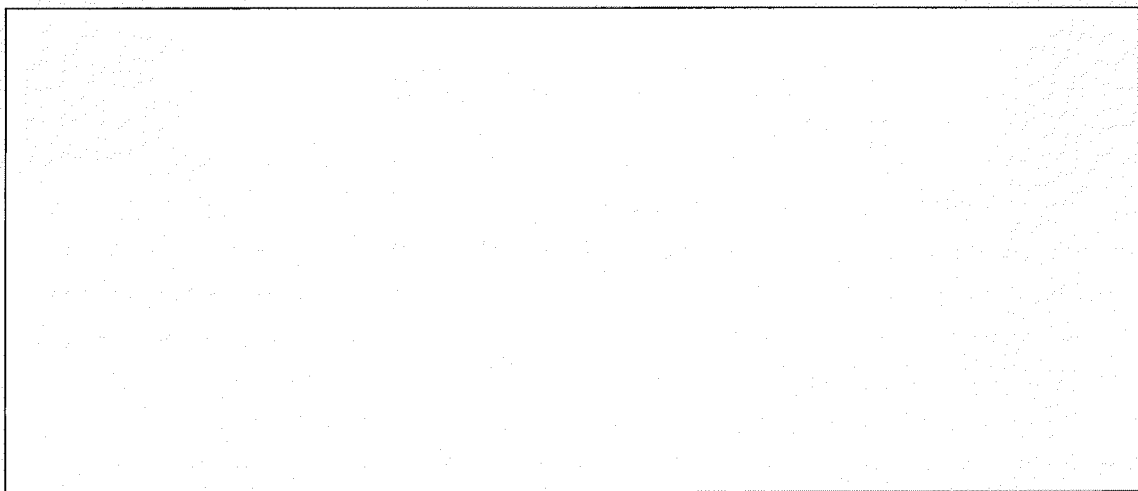
(Image taken a year before its establishment)	(Current year)
---	----------------

Map of Sampled Sites (including the sample plots)

--	--

This can be one or more if the contracted area has two or more sites.

Panoramic Photo





Geotagged Photos

A table with three rows and two columns, all cells being empty. It is positioned below the 'Geotagged Photos' header and is likely intended for listing or displaying geotagged photos.

Site 2

Unique Code: _____

Land Cover Comparison

Landcover Map of 2010	Landcover Map of 2020

Google Map (Before and Current)

(Image taken a year before its establishment)	(Current year)
---	----------------

Map of Sampled Sites (including the sample plots)

--	--

This can be one or more if the contracted area has two or more sites.

Panoramic Photo

Geotagged Photos

SUMMARY OF OBSERVATIONS OF SAMPLED PLOT OF AGROFORESTRY/HVCs

Unique ID of the Polygon: _____

Location (Municipality & Brgy/Sitio): _____

Area of the Polygon: _____

Planned Land-use Category: () Production () Protection

Name of PO Contactor/Acronym (if Any): _____

Component/Subproject Type: _____

Plot Code/No.: _____

Tenurial Status () Tenured, Type _____
 () Untenured but there is claimant
 () Untenured and no claimant

OBSERVATIONS

- 1 Presence or Absence of Manager/Claimant: () Present (Name: _____) () Absent
- 2 Current Average Spacing (___ M X ___ M) : _____
- 3 Are there replanting or enrichment planting activities done? () Yes () No () No Info
- 4 Presence or Absence of Cash Crops () Absence () Present, If present, enumerate the species: _____
- 5 Presence or Absence of Other Floral Species/Regenerants () Absence () Present, If present, enumerate the species: _____
- 6 Presence or Absence of Faunal/Animal Wildlife () Absence () Present, If present, enumerate the species: _____
- 7 Incidence of pest and diseases: () None () If there is/are, specify the species affected below

Species	Specific Pest/Signs/Symptoms	Severity (Severe, Not Severe)
Narra	Leaf scorching	Not Severe

8 Damage observed and its causes: () None () There is, specify the cause/s: _____

9 Has there been harvesting of trees observed in the sites/polygons/plots with the presence of stumps?
 () None () Yes, specify the trees harvested _____

10 Estimated Harvest from Fruit trees/HVCs, if already bearing

SPECIES <i>(unsa nga tanom)</i>	AGE OF THE TREE/FRUIT	FREQUENCY OF HARVEST	AVERAGE HARVEST PER TREE IN RAW FORM	WHETHER IS BEING MARKETTED OR NOT (Check 1 or 2 as appropriate)		
				No Market/Not sold/Given	Marketed/Sold Locally	With Direct Buyer
			3 fruits per fruiting season			
			Around 20 kg per fruiting season			

Is there any indication that the fruit bearing trees are not being harvested due to lack of market? No () () Yes, specify the species _____

11 Recommendation whether the plantation needs silvicultural treatment (e.g., thinning, removal of vines, pest and disease management)

Feedback from the POs/Caretaker, if any

Inventoried by (Names of Staff) : _____ Date Inventoried: _____

INPUT DATA OF INVENTORIED SAMPLE 1-HECTARE PLOT

Desk Input from Existing Data:

Unique ID of the Polygon: _____
 Area of the Polygon: _____ hectares
 Name of PO Contractor/Acronym (if Any): _____
 Year Contracted: _____
 Originally Planned No. of Seedlings Per ha or actual no. for less than 1 ha): _____
 Seedlings Planted After the 3-yr Contract Per ha: _____
 Original/Planned average spacing/ha (_M X _M): _____
 % Survival Rate of the last year of the Contract Period: _____
 Seedlings Planted Under NGP (Species): _____
 Tenurial Status Tenured, Type _____
 Untenured but there is claimant
 Untenured and no claimant

Subproject Year Contracted: _____
 Location (Municipality & Brgy/Sitio): _____
 Planned Land-use Category: Production Protection
 Component:
 For Timber/Commercial Tree Plantation
 Refo (for Protection Purpose)
 General Landcover of the site before it was planted (Check the appropriate box)

- Planted with Agricrops
- Pure Grassland
- Shrubland (presence of few/sparse stunted trees)
- Open Natural Forest (broad leaves)
- Open Pine Forest
- Closed Forest

Preliminary Field Data:

Plot Code/No.: _____
 Name of PO/Org. Taking Cared of the Area: Same as above
 Other, specify the Organization or Name: _____
 None

Slope: Generally Flat Moderate to Rolling Steep
 Average Elevation (Meters): _____
 Presence or Absence of Caretaker/Manager
 Present (Name of Caretaker: _____)
 Absent/Abandoned
 Not known

Date inventoried: _____

Inventoried by: _____

Seedling/Tree No.	Species	Whether Planted or Existing (Choose or Indicate 1)		Total Height (Meter with 1 decimal)	Mechantable Height (Meter with 1 decimal)	Diameter Breast Ht. (cm.)	Stem Form (choose one)		Shoot/Crown System (Choose One)		Remarks
		NGP Planted	Originally Existing Trees/Saplings & Regenerants (NON-NGP)				vertically straight, round and lignified	not vertically straight (crooked or forked)	Bushy and Good Tree Crown	Defoliated and/or Having Presence of Pest/Diseased	
1	Mangium (MAN)										
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
nth											

x x x x x x x x x x x x x x x x

Unique ID of the Polygon: _____

Location (Municipality & Brgy/Sitio): _____

Area of the Polygon: _____

Planned Land-use Category: () Production () Protection

Plot Code/No.: _____

Component/Commodity: () For Commercial Tree Plantation
() Refo (for Protection Purpose)

Assigned Plot Code/No.: _____

Tenurial Statu () Tenured, Type _____

() Untenured but there is claimant

() Untenured and no claimant

SUMMARY OF OBSERVATIONS OF SAMPLED PLOT

- 1 Presence or Absence of Manager/Claimant: () Present (Name: _____) () Absent
- 2 Current Average Spacing (___M X ___ M)
- 3 What is/are the dominant (tall) planted trees species: _____, _____
- 4 General Description of Stem Form: () Majority are vertically straight, round and lignified () Majority are not vertically straight (crooked or forked)
- 5 Presence or Absence of Other Floral Species () Absence (X) Present , If present, enumerate the species: _____
- 6 Presence or Absence of Faunal/Animal Wildlife () Absence (X) Present , If present, enumerate the species: _____
- 7 Incidence of pest and diseases: () None () There is/are, specify: _____

Species	Specific Pest/Signs/Symptoms	Severity (Severe, Not Severe)

- 8 Damage observed and its possible causes: () None () There is, specify the cause: _____
- 9 Was there any replanting done after the contract period? () Yes () No () No Info
- 10 Recommendation whether the plantation needs silvicultural treatment (e.g., thinning, removal of vines)

11 Recommended major land-use () For Production () For Protection

12. Feedback from the POs/Caretaker, if any

Inventoried by: _____

Date Inventoried: _____

ANNEX C-3B. FOR MANGROVE REFO AREAS

SUMMARY OF OBSERVATIONS OF SAMPLED PLOT

Unique ID of the Polygon: _____ Location: _____
Area of the Polygon: ___ hectares Planned Land-use Category: () Production () Protection
Plot No. _____
Tenurial Status () Tenured, Type _____ Landcover of the site before it was planted (based on landcover map of 2010):
() Untenured but there is claimant
() Untenured and no claimant

OBSERVATIONS

- 1 Presence or Absence of Manager/Claimant: () Present (Name: Atty. Allen S. Quimpo) () Absent
- 2 Current Average Spacing: M X M
- 3 Presence or Absence of Other Floral Species () Absent () Present, If present, enumerate the species: _____
- 4 Presence or Absence of Faunal/Animal Wildlife () Absent () Present, If present, enumerate the species: _____
- 5 Incidence of pest and diseases: () None () There is/are, specify: _____
- 6 Damage observed and its possible causes: () None () There is, specify the cause: _____
- 7 Was there any replanting activities done after the contract period? () Yes () No () No Info
- 8 Recommendation whether the plantation needs silvicultural treatment (e.g., thinning, removal of debris/plastics) _____
- 9 Recommended land-use () For Production () For Protection

Feedback from the POs/Caretaker, if any

SUMMARY OF OBSERVATIONS OF SAMPLED PLOT

Desk Input from Existing Data:

Unique ID of the Polygon: _____

Location (Municipality & Brgy/Sitio): _____

Area of the Polygon: ___ hectares

Planned Land-use Category: () Production () Protection

Name of PO Contactor/Acronymn (if Any): _____

Component/Subproject Type: _____

Tenurial Status () Tenured, Type _____

() Untenured but there is claimant

() Untenured and no claimant

OBSERVATIONS

1 Presence or Absence of Manager/Claimant: () Present (Name: _____) () Absent

2 Current Average Spacing: M X M

3 Presence or Absence of Other Floral Species () Absent () Present, If present, enumerate the species: _____

4 Presence or Absence of Faunal/Animal Wildlife () Absent () Present, If present, enumerate the species: _____

5 Incidence of pest and diseases: () None () There is/are, specify: _____

6 Damage observed and its possible causes: () None () There is, specify the cause: _____

7 Has there been harvesting of trees observed in the sites/polygons/plots with the presence of stumps?

() None () Yes, specify the trees harvested _____

8 Recommendation whether the plantation needs silvicultural treatment (e.g., thinning, removal of vines) _____

9 Recommended land-use () For Production () For Protection

Feedback from the POs/Caretaker, if any

Inventoried by (Names): _____ Date Inventoried: _____

Specific Procedure for Sampling, Inventory, and Key Informant Interview

I. RATIONALE

The issuance of Executive Order (EO) No. 26 in 2011 mandated the Department of Environment and Natural Resources (DENR) to spearhead the implementation of the National Greening Program (NGP) in partnership with other national government agencies, academe, civil society organizations, and other stakeholders. The NGP aims to contribute to addressing national concerns about *poverty reduction, food security, environmental stability, biodiversity conservation, and climate change mitigation and adaptation.*

The program targeted the rehabilitation of 1.5 million hectares of degraded forest lands from 2011 to 2016. By the end of 2016, a total of 1.6 million hectares had been planted. This prompted the government to issue EO No. 193 expanding the coverage of the NGP to cover all remaining unproductive, denuded, and degraded forests, with its period of implementation also extended from CY 2016 to CY 2028.

Through the years, the Program has established these sites through partnerships with different stakeholders including Local Government Units (LGUs), other government agencies, the academe, different People's Organizations (POs), families, and the private sector. However, aside from ensuring the production of planting materials, establishing sites, and maintenance and protection activities, the DENR is also responsible for the proper recording of these project sites in the Book of Accounts as the Program is funded by the government and the Filipino people, and the sites are considered as government assets.

It has been made known through several correspondences and coordination meetings between the DENR Central and Field Offices, and the Forest Management Bureau (FMB) that some of our field offices are having difficulties in properly recording the project sites in the Book of Accounts, from Construction in Progress (CIP) to Land Improvements (LI). There also have been issues on the requests for recognition of impairment loss, derecognition, delisting, and filing of relief of accountability in relation to the project sites damaged by force majeure (e.g., typhoons, landslides, etc.).

In line with this, the Department crafted this manual in order to provide the standard procedures on the inventory, assessment, and reconciliation of records of graduated NGP plantations which shall be used by the third-party evaluators that will be engaged by the DENR Regional or PENR Offices.

II. OBJECTIVES

1. To determine the current stocking density or number of standing trees vis-a-vis reported number of seedlings planted under NGP graduated plantations;
2. To determine the initial impact on the socio-economic condition of the POs and their perception of improvement in environmental conditions, and their impression in the implementation of NGP; and
3. To determine NGP implementation gaps and possible interventions.

III. SCOPE AND COVERAGE

This manual is intended for the inventory, assessment, and reconciliation of records of graduated NGP contracted projects.

IV. MATERIALS/EQUIPMENT/REFERENCE

In general, below are the materials, equipment, and tools needed for the conduct of the activities stipulated in this Manual:

1. GPS
2. Drone
3. Smartphone
4. Android Geocam
5. Diameter tape
6. Meter Tape
7. Haga Altimeter, Rangefinder or Five-meter Pole with 1-meter mark
8. Pencil/Pen
9. Clipboard or writing surface for the Inventory (Using the Data Capture Form)
10. Interview Forms/Questionnaire
11. Data Capture and Observation Form
12. Computer/Laptop
13. GIS Software
14. Database by year and shapefiles of graduated NGP plantations or any other applicable reforestation plantations/projects

In addition, for the safety of the users of this Manual, the following are also encouraged:

1. First Aid Kit
2. Head lamp
3. Camping Tent
4. Outdoor Sleeping Bag
5. Raincoat

Additional tools and equipment may be needed depending on the conditions or situations in the site.

V. GENERAL METHODOLOGY AND EXPECTED OUTPUT

Listed below are the general methodology and expected output per major activities/module. Specific objectives, detailed methodology, and parameters of analysis vis-à-vis expected output area shall be provided per area of assessment/module.

Table 1. General Methodology

ANNEX E

AREA OF ASSESSMENT	GENERAL METHODOLOGY	EXPECTED OUTPUT
1. Inventory of Physical status of areas planted and condition of the site	<ul style="list-style-type: none"> • Map analysis on landcover/vegetation change using Arc-GIS, Google imagery and drone images, sample geotagged photos • Inventory of sample plot/s • Field observation during the physical/ground inventory using data capture forms 	<ul style="list-style-type: none"> • Comparison of vegetation/land-cover • Growth performance, based on diameter, height, and volume estimation of sampled areas • Tenure or management status of the area • Observed threats and causes of damage • images from drone or geotagged pictures • List of recommended areas for delisting and redevelopment • List of recommended plantation areas to be protected (for protection purpose), and for production purpose as source of livelihood and food
2. Key Informant Interview	<ul style="list-style-type: none"> • Interview with the key PO Chair and its members 	<ul style="list-style-type: none"> • Perceived initial outcome of socio-economic and natural/environmental capital out of NGP Implementation, lessons etc

VI. SPECIFIC METHODOLOGY

PLANTATION/FOREST DEVELOPMENT INVENTORY AND ASSESSMENT

The conduct of a field inventory and assessment of graduated NGP plantations aims to determine the current stocking of the planted sites and to identify other sites that have already been damaged by natural and other occurrences and therefore can be considered to be delisted or derecognized.

A. SAMPLE SIZE DETERMINATION

Based on contract, all graduated NGP plantations shall be validated through the conduct of inventory. For contracted areas less than 1 ha, 100% inventory shall be undertaken. For example, if the contracted area to be inventoried is 0.89 hectares, then the sampling size shall also be equal to 0.89 hectares.

ANNEX E

For contracted areas equal to or greater than 1 ha to represent the whole area contracted, the number of sample plots for these areas can be computed using the formula below:

$$\text{Number of sample plots} = 1 + ((0.05) \times (a-1))$$

Where: **1 ha** being the minimum area to be validated
0.05 or the (5%) of the area upon deducting 1 ha
a is the NGP contracted area

If the contracted area is 80 hectares, which falls within the range of 1 hectare and above, the number of sample plots is equivalent to five (5) 1-hectare plots and so on. The assigning of sample size shall be done using MS Excel. The result should be rounded off to get a whole number.

Example: Contracted area is 80 ha

$$\begin{aligned} \text{Number of sample plots} &= 1 + ((0.05) \times (80 - 1)) \quad (\text{in excel: } =\text{ROUND}(1+((0.05)\times(\text{area contracted}-1))) \\ &= 5 \text{ sample plots divided into 1-ha sample area/size} \end{aligned}$$

After the determination of the number of sample plots, the team shall employ a random sampling of plots. The area/size of each sample plot is **100m x 100m or 1 ha**. Random plots shall be determined using the Grid Index feature and Random Point Selection of GIS software. For reference, an image is shown below showing the Grid Index and Random Point Selection features of GIS software.

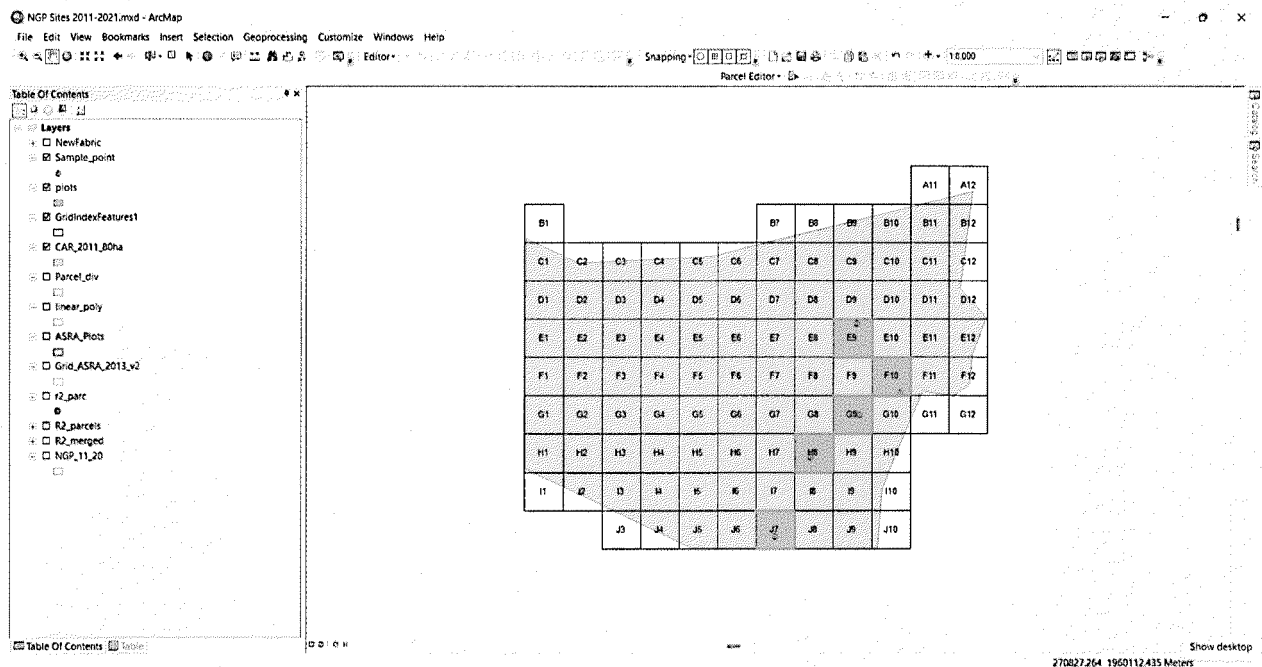


Figure 1. Grid Index and Random Point Selection features

For contracts having more than one (1) site/polygon established, all sites/polygons shall be clustered and merged so that all will be included in the random plot selection.

Should the randomly selected plot fall under boundaries, bodies of water, ravines etc., the Third-party Evaluator shall select any plot adjacent to the said plot.

Sites/polygons that have been officially reported to COA as impaired (almost completely devastated or devoid and have remained as grassland) will no longer be subjected to ground survey but will instead be photographed with drones (in stitch and still photos).

ANNEX E

B. COORDINATION PRIOR TO THE INVENTORY

Proper coordination with the NGP partners depending on the nature of partnership (e.g., Academe, People's Organizations [POs], etc.), LGU/s concerned, and other applicable stakeholders shall be conducted by the team.

The team shall make known the objectives, activities, and schedule for this activity to the concerned stakeholders, as well as the team composition that shall be conducting the fieldwork.

C. PREPARATORY ACTIVITIES, ACTUAL FIELD INVENTORY, AND PHOTO DOCUMENTATION

DENR-led

1. Update the contract database, then add an additional column where the sample size of each contract will be computed using MS Excel.
2. Generate the dbf file or data attributes of the latest submitted NGP shapefile to be used in the initial site identification for sampling. In reference to the updated contract database, they shall determine which sites are covered by a single contract so that they are all taken into account when creating sampling plots.
3. From the contract database create a separate sheet and identify/prioritize those to be subjected for inventory given the total target sample size for the year by Province and CENROs.
4. Create a single Excel file containing each sheet for contracts database, yearly accomplishment (by PENRO) and a dbf file.
5. In the NGP ARC-GIS file, update the attributes by adding a contract code. The purpose of the contact code is to assign specific code or identity for those contracts having either one site or two/more sites, which will be used in the random selection. The contract code to be used is a concatenate of Year, PSG Code and numeral to 1 to more digit (e.g., 2011-012815000-1)
6. Provide to the Third Party the contract database and the shapefiles for them to determine and locate the plots to be sampled within the site or cluster of sites using the Grid Index Feature of ArcGIS.
7. Set a briefing and leveling off meeting with the Third Party to discuss their activities and expected output/deliverables.
8. Simultaneously during the inventory DENR staff will do the drone shoot. When taking drone shots, the aerial photo of the site/polygon shall be the first to be focused followed by the subject plot. This will be taken both in stitch (at least 4 images) and still photo (at least 4 shots each for the site and plot). (Note: sample images which include the land-cover map and kmz of each site, drone shots and photos, will be integrated for comparison given the attached pro-forma as Annex B)

Third Party-led

9. Determine using the Random Point Selection feature of the GIS Software. Each plot should have an area of one (1) hectare. If and when the result of random plot selection is almost clustered, a second iteration of random sampling may be done in such a way that the result is somehow stratified or evenly distributed.
 - a. For Contracted areas with only 1 site/polygon, Random points based on the number of sample plots to be determined shall be drawn using the Random Plot Selection feature. Plot boundaries having 100m x 100 m area shall be drawn using the Grid Index Feature.
 - b. For Contracted areas with more than 1 site/polygon, the following shall be undertaken:
 - i. In the attribute table, select, extract and export all the sites established under 1 contract and create 1 shapefile for it.
 - ii. In order to generate random point location of the sample plots for 1 contracted area, all polygons should be merged using the "Merge" feature of the ArcMap editing tools.
 - iii. Once random point location of the sample plots are determined, grids may be created by using the Grid Index Feature of ArcMap to set the boundaries of the 1-ha square sample plot.
 - iv. In case the random point location falls to a 1-ha site/polygon, the boundaries of the polygon will serve as the guide line of the sample plot. In case it falls within an area of more than 1 hectare, the grids generated will serve as the boundaries of the sample plots.
 - c. For plantations established along roadside and riverbanks, the determination of random plot location shall follow the process discussed earlier. However, since its polygons are almost linear, the 100m x 100 m sample plots cannot be used. In this case, sample plots can be irregular-shaped but should still equal 1 ha or 10,000 m². The boundary of sampling plots for this case can be generated through the Parcel Editor tool of ArcMap.
 - d. For the **mangrove areas** planted, given the relatively high stocking density as distinguished from other components, **five (5) 10 x 10 meter quadrants** for each randomly selected plots will be set-up as sample areas. The quadrants should be distributed in the corners of the plots and one in the middle of the plot as illustrated below:

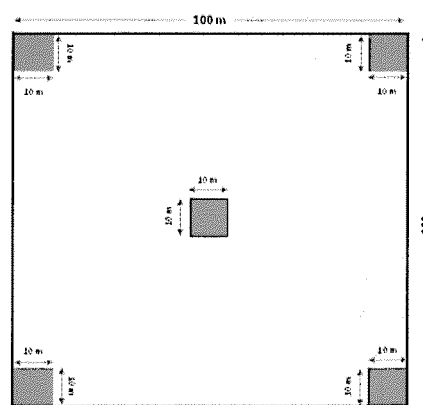


Figure 2. Distribution of quadrants within the 1-ha sampling plot of mangrove plantation

ANNEX E

10. Save the map as a .kmz/kml file and load the file to the GPS or smartphone in order to easily locate the random plots. For mangrove reforestation component, be guided by the earlier mentioned procedure in setting the quadrants per plot.
11. Upload the generated shapefiles of the sample 100 x 100 M size plot/s in the GPS.
12. Initially prepare the jpeg maps generated per site to be copied and pasted to Individual Contract Report (attached as Annex B).
13. Fill up the initial data under desk input data (to be drawn from the existing database) in the capture form/s to be used for the day/week.
14. Print as many capture forms as pre-filled up with initial data and observation forms that will be used for the targeted sample plots to be inventoried for the week or month. As a suggestion, a printer or and sufficient A4/legal size paper be brought by the Third Party's inventory at their barangay station.
15. Create a file folder and save an individual Excel file of the capture forms for each Contract.
16. Ready the GPS, Smartphone with Android Geocam, Diameter tape, Meter Tape, Haga Altimeter, Rangefinder or Five-meter Pole with 1-meter mark, Pencil, clipboard (where the capture forms will be mounted), straw in setting the boundary
17. Locate the plot to be inventory in the selected sites and conduct the inventory.
18. Upon arrival at the sampling plot, a 100-m transect line for those 1-hectare plot/s shall be established. Another 100-m transect line shall be established perpendicular to the first transect line. This shall enable the team to set-up a 100m x 100m square sampling plot. The use of a straw to establish the precise boundary of the plot, especially for those 1-hectare plots is suggested.
19. Carry out the inventory and fill-up/record the required data using the data capture form and thereafter the observation forms. All seedlings planted as well as those existing trees, saplings having a minimum diameter of 5 cm and regenerants with at least 1 meter height with its merchantable and total height, and DBH, among others, health status shall be recorded. Planted seedlings which are presumably grown as trees that are already decaying that have low chances to survive shall be excluded from the inventory (as we are after the number of trees survived). However, these decaying and infested trees should be noted in the observation form.
20. As a means of verification, take at least two (2) panoramic and 10 geotagged photos in each of the sample plots. The geotagged photos to be taken should represent the description or observation of the subject species and site. For example, if the intent is to describe the height of the trees, photos to be taken and used should show its full height with a height measurer holding the five(5) meter pole. Aside from the photos of the seedlings, the general condition of the area shall also be documented using the said photos.

D. CONDUCT OF KEY INFORMANT INTERVIEWS (KIs by the Third Party)

1. The team shall conduct key informant interview of at least three (3) *in-situ* members among the POs/barangay or local beneficiaries/organizations/institutions identified, subject to the availability of such interviewees; The Team may be accompanied by DENR staff and act as observer or resource person.

ANNEX E

2. Interview details shall be used in validating documents and in providing feedback on the implementation and the gains of the Organization from the Program.
3. After the conduct of the KII with the PO members, input the data collected in an excel sheet.

E. DESK INPUTTING OF DATA CAPTURED, UPDATING OF MAP DATA ATTRIBUTES AND CONSOLIDATION OF RESULTS

1. After the conduct of inventory work, documents review, and KIIs, the third-party evaluator shall input the obtained data/information to the corresponding "encoding sheet" (excel file) for each plot and summary sheet
2. In the encoding of data, the DENR and Third Party staff may sit down jointly, to properly encode and generate the expected data and data analysis and consolidation. DENR shall specifically review the data inputted so as to reduce erroneous submission of results (refer to the Annex on the Inventory and Data Analysis Framework).
3. For the volume computation, be guided with the regional volume equation for Dipterocarp and Non-dipterocarp species.
4. The third-party evaluator must enter the properly completed inventory (data captured) from the plots inventoried and input the summary results by polygon into the excel-based file.

F. DATA ANALYSIS

1. Results of the inventory work and data review shall be inputted in the data capture forms.
2. Using the data capture forms, a summary of expected harvestable volume of trees planted for production, and volume of harvest from fruit-based or high value crops shall be determined.

VIII. EXPECTED OUTPUT

1. Geotagged photos
2. Updated maps, if necessary
3. Data on stocking density (number of trees, saplings and 1-meter regenerants both planted and existing
4. Observations of presence or absence of care, taker; other floral species, replanting activities, if any, incidence of pest and disease harvesting conducted and recommendations.
5. Individual results of assessed contracted areas vis-a-vis sites
6. Monthly Progress Report

IX. REPORTING

The third-party evaluators may provide monthly updates on the number of sites assessed and inventoried to DENR for initial review. The third-party evaluator shall submit a completion report to the DENR including the shapefiles, encoded data in the capture form, and individual results of contracted areas out of the inventoried sample plots as provided for in the contract.