



Republic of the Philippines  
Department of Environment and Natural Resources

**FOREST MANAGEMENT BUREAU**

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**MEMORANDUM**

**FOR** : The Regional Executive Directors  
All Regions except NCR

**FROM** : The OIC-Assistant Secretary for Field Operations - Western  
Mindanao and Director, in concurrent capacity

**SUBJECT** : **ACTIVITY REPORT AND AGREEMENTS ON THE  
CLUSTER WORKSHOPS ON THE INVENTORY OF  
STRUCTURES WITHIN FORESTLAND HELD LAST 10-13  
AND 24-27 OCTOBER 2023 IN CAR AND REGION 7,  
RESPECTIVELY**

**DOCUMENTS ATTACHED** : 1. *Workshop Activity Report*  
2. *Initial Universe for Vetting*  
3. *Template for equipment and personnel inventory listing*

**DATE** : **DEC 04 2023**

DEC 04 2023

RECORDS UNIT

RECEIVED  
MIMAROPA  
RECORDS SECTION

DEC 13 2023

OUTGOING

DAYS NO.

This has reference to DENR Special Order No. 2023-655 authorizing the conduct of Workshop on the Inventory of Structures within Forestlands on 10-13 October 2023 (Cluster 1) in Cordillera Administrative Region and 24-27 October 2023 (Cluster 2) in Region 7. The activity was participated by the Division Chiefs or their representatives of the Enforcement Division, Licenses Patents and Deeds Division, Conservation and Development Division, Planning and Management Division, and Regional GIS Focal.

The workshop was conducted to solicit your invaluable comments and suggestions in the draft Department Administrative Order (DAO) on the Guidelines for the Inventory of Structures within Forestlands as well as discuss the Unit of Work Measurements (UWM) and Initial Universe per Region.

The following are the major agreements from the said workshop:

1. The DAO shall cover the inventory of all structures, including both vertical and horizontal structures within forestlands;
2. The extent of forest lands to be used in this activity shall be based on the Harmonized Land Classification Map of NAMRIA excluding Legislated Protected Areas (NIPAS and ENIPAS). The FMB in coordination with the National Mapping and Resource Information Authority and the Geospatial Database Office shall draft a clarificatory



Memorandum on the use of the Harmonized Land Classification Maps (in vector format) and the process of verification of land classification;

3. All Regional Offices (ROs) shall review and check the initial universe provided by FMB for their vetting and/or concurrence. The figures per region are shown in Attachment 2 and shapefiles can be accessed through this link: <https://tinyurl.com/SHAPEFILES-FOR-SHARING>
4. In terms of the procurement of equipment and hiring of personnel to support the activity, the ROs shall provide an inventory or listing of existing and serviceable Unmanned Aerial Vehicles (Drones) in the ROs and in the Field Offices. Hiring of enumerators (1/500 hectares) and database management officers (1 per region) shall also be proposed to support the implementation, however, an inventory is also being requested for our reference. Attachment 3 provides for the template to be used in the inventory or listing.

Kindly submit your inputs and respective inventory **on or before December 11, 2023**. If you have any questions and/or clarifications, please do not hesitate to contact us at [fppkmd.fgdis@fmb.denr.gov.ph](mailto:fppkmd.fgdis@fmb.denr.gov.ph) or at (02) 8 921-0752.

For your information and further appropriate action, please.

  
ARLEIGH J. ADORABLE, CESO III





OD Records Unit &lt;records@fmb.denr.gov.ph&gt;

## D-42535- Activity Report and Agreements on the Cluster Workshops on the Inventory of Structures within Forestland held last 10-13 and 24-27 October 2023 in CAR and Region7, respectively

1 message

OD Records Unit &lt;records@fmb.denr.gov.ph&gt;

Mon, Dec 4, 2023 at 4:39 PM

To: DENR Region 1 <r1@denr.gov.ph>, denr1ored <denr1ored@yahoo.com>, DENR Region 2 <r2@denr.gov.ph>, DENR Region 3 <r3@denr.gov.ph>, DENR CALABARZON <r4a@denr.gov.ph>, DENR Mimaropa Region <r4b@denr.gov.ph>, DENR Mimaropa Region <mimaroparegion@denr.gov.ph>, DENR Region 5 <r5@denr.gov.ph>, "DENR Regional Office No. 5" <red\_reg5@yahoo.com>, DENR Region 6 <r6@denr.gov.ph>, DENR Region 7 <r7@denr.gov.ph>, DENR-7 <reddenr7@yahoo.com>, DENR Region 8 <r8@denr.gov.ph>, DENR R8 ORED <ored8@yahoo.com>, DENR Region 9 <r9@denr.gov.ph>, RPAO DENR 9 <rscig.denr9@gmail.com>, "DENR-10 RED HENRY A. ADORNADO, PhD" <r10@denr.gov.ph>, DENR R11 <r11@denr.gov.ph>, DENR XI <oredenrxi@yahoo.com.ph>, RSCIS Region 12 <r12@denr.gov.ph>, "Atty. Felix Alicer" <red.region12@gmail.com>, DENR Caraga Region <r13@denr.gov.ph>, DENR CARAGA ORED <ordcaraga@gmail.com>, DENR Cordillera Administrative Region <car@denr.gov.ph>, DENR Cordillera Administrative Region <denr\_baguio@yahoo.com.ph>, recordsunitdenr3@yahoo.com, Records Section\_DENR MIMAROPA <recordsectionmimaroparegion@gmail.com>, Records DENR V <recordsdenr5@gmail.com>, recordsunit.denr.r6@gmail.com, Records Unit <r7.recordsunit@gmail.com>, denr9recordsunit@yahoo.com, r10.recordsunit@gmail.com, "DENR-XI, Records Unit" <denrecordsxi@gmail.com>, denrcaragarecords@gmail.com, denrcarrecords@gmail.com

Cc: "FPPKMD Forest Policy, Planning and Knowledge Management Division" <fppkmd@fmb.denr.gov.ph>, FPPKMD-FGDIS Forest Geospatial Data Infrastructure Section <fppkmd.fgd@fmb.denr.gov.ph>, Kenneth Tabliga <ktabliga@fmb.denr.gov.ph>, Larlyn Faith Aggabao <lfaaggabao@fmb.denr.gov.ph>

Sir/Ma'am

Good day

Attached file is a Memorandum for All REDS except NCR dated December 4, 2023 RE: Activity Report and Agreements on the Cluster Workshops on the Inventory of Structures within Forestland held last 10-13 and 24-27 October 2023 in CAR and Region7, respectively

Thank you




### Records Unit

Forest Management Bureau

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 12-04-23- D-42535- Activity Report and Agreements on Cluster Workshops on the Inventory of Structures within Forestland in CAR and Region 7.pdf  
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## ACTIVITY REPORT:

### WORKSHOP ON THE INVENTORY OF STRUCTURES WITHIN FORESTLANDS

OCTOBER 10-13 | LAFAAYETTE LUXURY SUITES, BAGUIO CITY, BENGUET  
OCTOBER 24-27 | BAI HOTEL, MANDAUE CITY, CEBU

#### I. IDENTIFYING INFORMATION

Learning Event	Workshop on the Inventory of Structures Within Forestlands
Learners	Personnel from the following FMB Divisions: Forest Policy, Planning and Knowledge Management Division Forest Resources Conservation Division Forest Resources Management Division  Personnel from the DENR Regional Offices: Chief, Planning and Management Division Chief, Conservation and Development Division Chief, Enforcement Division Chief, License, Patents, and Deeds Division Regional GIS Focal
Venue	Cluster 1: Lafaayette Luxury Suites, Baguio City, Benguet Cluster 2: Bai Hotel, Mandaue City, Cebu
Duration	Cluster 1: October 10-13, 2023 Cluster 2: October 24-27, 2023
Program Manager	Larlyn Faith C. Aggabao Chief, Forest Geospatial Data Infrastructure Section Forest Policy, Planning and Knowledge Management Division
Resource Person/s	Larlyn Faith C. Aggabao Chief, FGDIS-FPPKMD  Sharmaine Jane B. Ferrer Senior Forest Management Specialist FGDIS-FPPKMD  Elmar Sobrevega Project Monitoring and Evaluation Officer FGDIS-FPPKMD  Roja Guia S. Bati-on Officer-in-Charge Statistics and Data Resource Management Division
Training Budget	Php 1,676,000.00 for Clusters 1 and 2
Fund Used	Cluster 1: Php 935,400.00 Cluster 2: Php 1,056,400.00



## II. EXECUTIVE SUMMARY

Structures are improvements and developments which are man-made in nature made to the land which can be permanent or temporary. With the increasing population in lowland, some of the individuals tend to settle in the upland particularly in forest land and grab this opportunity to construct and build dwelling areas while identifying their sources of income and livelihood. Though there are agreements or instruments issued to individuals or communities by national government agencies, there are still undocumented structures that are being established without the consent of the government authority. Further, establishment of structures without any permits within forest land may pose threat to the wildlife resources and ecosystem services.

Through years, the Department has made consistent efforts in the conservation, management and protection of the environment. Pursuant to Article 2 Section 16, *"The State shall protect and advance the right of the people to a balanced and healthful ecology in accord with the rhythm and harmony of nature"*. The Department issued memoranda to conduct inventory of structures within tenured and untenured forest lands, to wit: Memorandum from the Undersecretary for Field Operations and Environment dated 21 September 2023 with the subject *"Inventory of All Structures inside the Classified Forest Lands and the Issuance of Appropriate Tenurial Instruments Thereof"*, Memorandum from the Undersecretary for Field Operations dated 19 April 2018 with the subject *"Inventory of Bathing Establishments, Hotel Sites inclusive of Resort Facilities, Campsite and Ecotourism Sites Built within Forest Land"*, and Memorandum from the OIC Undersecretary for Field Operations dated 17 March 2017 with the subject *"Conduct of Inventory of Telecommunication Platforms/ Facilities build within Public Forest or Timber Land Areas"*.

In 2021, the Forest Management Bureau (FMB) started to devise a methodology on how to identify structures within forest lands. With the advancement of technology, the availability of different geospatial technologies such as the use of satellite images, unmanned aerial vehicles (UAV) and in situ and ex situ validation have been seen as an advantage. The inventory of structures within forestlands is made possible to have a baseline inventory of structures which will give policy-makers a basis in updating existing laws, rules and regulations and formulate science-based policies.

To provide guidance and much more in depth methodology in conducting inventory of structures within forest lands, the proposed DAO was formulated. This proposed DAO includes the general procedures of the conduct of inventory of structures, derivation of universe, location of universe, methodology that shall be used based on the land cover map provided by NAMRIA, as well as the composition and roles of different offices and teams that shall be created during its implementation.



### **III. WORKSHOP/TRAINING OBJECTIVES**

The workshop aims to provide guidance and capacitate the Regional Offices in the conduct of an inventory of structures in forestlands using Geographic Information System (GIS), with data from Unmanned Aerial Vehicle (UAV) photogrammetry and remote sensing, and in situ validation and information collection using Offline Data Collection Tools (ODCT). Specifically, it aims to:

- a. Present the pilot ground validation results of identification of structures within the forestlands of Zamboanga Peninsula;
- b. Present the draft DENR Administrative Order (DAO) for the Guidelines on the Inventory of Structures within Forestlands;
- c. Discuss the procedure in identifying areas within forestlands;
- d. Conduct policy analysis on the proposed DAO; and
- e. Introduce and capacitate field office personnel in using ODCT (i.e. ODK Collect, ArcGIS Field Maps, Survey123) with Android/IOS smartphones.

### **IV. METHODOLOGIES**

The methodologies adopted are lectures, plenary sessions, focus group discussions, and hands-on demonstrations.

### **V. LEARNERS**

The workshop was facilitated by the technical staff from the Forest Geospatial Data Infrastructure Section (FGDIS) of the Forest Policy, Planning, Knowledge and Management Division (FPPKMD) at the Forest Management Bureau (FMB). The total number of learners for the two cluster workshops is 68 and 65, respectively. Cluster 1 consisted of 26 staff from FMB and 41 participants from DENR Regional Offices in Luzon. Meanwhile, Cluster 2 was composed of 23 staff from FMB and 41 participants from DENR Regional Offices in Visayas and Mindanao.

### **VI. WORKSHOP HIGHLIGHTS**

The workshop was composed of lectures, plenary sessions, focus group discussions, and hands-on demonstrations on the inventory of structures within forestlands using GIS, RS, and ODCT. The following are the highlights of the workshop for ready reference:

Topics	Salient Discussions
Rationale and Overview of the Workshop	The FGDIS Chief, For. Aggabao, presented the rationale and objectives of the workshop, written in Section III of this report. The participants were expected to provide



Topics	Salient Discussions
	comments, recommendations, and policy analysis on the draft DAO and be capacitated in conducting surveys using ODC.
Pilot Testing and Ground Validation in Zamboanga Peninsula	<p>For. Aggabao presented the results of pilot testing and ground validation on inventory of structures within the forestlands of Zamboanga Peninsula. Within the five (5) pilot sites located in Zamboanga Del Sur and Zamboanga Sibugay, there were 1,193 structures. Further findings in the methodology are as follows:</p> <ul style="list-style-type: none"> <li>- Structures within areas covered with forest canopy need ground validation;</li> <li>- Drone images have better resolution than satellite images, but drone operation is costly and highly dependent on the terrain and weather conditions</li> <li>- ODK collect is free, but storage is limited and data security is unreliable</li> </ul>
Draft DAO	<p>For. Ferrer discussed the draft DAO for the Guidelines on the Inventory of Structures within Forestlands. The draft policy was prepared to provide guidance to field offices in the conduct of inventory of structures within forest lands using different geospatial technologies. This introduced three (3) major methodologies as well as the classification of the location of structures in the conduct of the mentioned activity. The learners have actively participated in the discussion and raised concerns mostly on the following topics:</p> <ul style="list-style-type: none"> <li>- definition of structures - permanent and temporary</li> <li>- prioritization of structures</li> <li>- type of structures</li> <li>- compositions of regional technical working group (RTWG) and ground validation team (GVT)</li> <li>- roles and responsibilities of RTWG, GVT, and FMB before, during, and after the conduct of the activity</li> <li>- submission of report from GVT to RTWG, and RTWG to FMB</li> <li>- performance indicator</li> </ul>
Workshop on Draft DAO	<p>Cluster 1 participants were grouped by Division, while Cluster 2 participants were grouped by Region.</p> <p>In this activity, the participants were tasked to comment on the draft DAO and provide recommendations for its improvements. The breakout session was facilitated by FPPKMD personnel. All comments and suggestions were consolidated by the technical staff of FGDIS-FPPKMD.</p>



Topics	Salient Discussions
Processing of Initial Universe	<p>For. Sobrevega presented the workflow in processing the initial universe for the inventory of structures within forestlands and the figures for the initial universe itself. He further explained the classification of structures and the recommended methodology of inventory for each class:</p> <ul style="list-style-type: none"> <li>- ODC T and Drone Survey: open and closed forests with 0-18% slope; perennial croplands</li> <li>- Satellite Image Analysis: open and closed forests with slope &gt; 18%; CADT and other land cover outside forest tenure</li> <li>- Tenure Compliance Monitoring Data: forest tenure</li> </ul> <p>Lastly, he presented the workaround done by FGDIS in addressing the issues of inter-region overlaps in forest tenurial instruments.</p>
Introduction to ArcGIS Survey123 and ArcGIS Field Maps	<p>For. Bati-on, Chief of SDRMD and the Deputy Head of the DENR Geospatial Database Office introduced ArcGIS Survey123 and ArcGIS Field Maps as part of the discussion on offline data collection tools (ODCT), to which she explained in detail the unique features of each application, its advantages, disadvantages, and applicability in the inventory of structures within forestlands.</p>
Introduction to ODK Collect	<p>For. Sobrevega provided an overview of ODK Collect. Likewise, he discussed its key features, components, and the flow in which data gathered in the field will be stored in a cloud server and can be downloaded and analyzed accordingly. He concluded by presenting a matrix of the three ODCTs, highlighting their operating systems, type of application, data security, data storage, and backup, among others.</p>
Hands-on Activity: Offline Data Collection Tool	<p>For. Sobrevega demonstrated offline data collection using Survey123, Field Maps, and ODK Collect. The participants had a hands-on exercise, facilitated by FGDIS technical staff, where they collected data on structures located inside and outside the workshop venue using the three mentioned applications. Afterwhich, For. Sobrevega presented the results of the activity and the issues (e.g. location configuration, smartphone OS and hardware specifications) that need to be addressed for higher data accuracy. An open forum also happened after the activity to discuss the experiences and problems they have encountered during the hands-on activity.</p>
SWOT and PESTLE	<p>For. Ferrer and For. Celis discussed the two (2) tools used</p>



Topics	Salient Discussions
Analysis	<p>in Policy Analysis such as SWOT Analysis and PESTLE Analysis. SWOT analysis is a strategic planning tool used to evaluate internal and external factors which are favorable and unfavorable in achieving the objective of the policy. This stands for strength, weaknesses, opportunities, and threats. On the other hand, PESTLE Analysis is a tool used to examine the macro-external factors that affect a policy. This stands for Political, Economic, Social, Technological, Legal and Environmental factors.</p> <p>The identified policy analysis during the pilot testing were discussed and explained.</p>
Workshop on Policy Analysis	<p>The participants were grouped by Region to discuss among themselves the factors and impact that may affect the proposed DAO during its implementation.</p> <p>In Cluster 1, the policy analysis was a take home exercise and was submitted before the end of the workshop. On the other hand, in Cluster 2, the outputs were presented and discussed.</p>
Consolidated Workshop Outputs	<p>For. Aggabao presented the consolidated comments and recommendations of the participants on the draft DAO. Some of the suggestions adopted from the Cluster 1 workshop were presented during the Cluster 2 workshop. Although the way in which the participants were grouped varied during the two workshops, the sessions paved a way to reconcile inputs and provide insightful recommendations to refine, strengthen, and improve the policy on the inventory of structures within forestlands.</p> <p>Discussions were especially heavy on the following Sections in the DAO:</p> <ul style="list-style-type: none"> <li>- Section 3. Scope and Coverage;</li> <li>- Section 4. Definition of Terms;</li> <li>- Section 8. Creation of Regional Technical Working Group and Ground Validation Teams;</li> <li>- Section 9. Roles and Responsibilities;</li> <li>- Section 10. Reporting and Integration in Forestry Spatial Dataset Portal and DENR Control Map; and</li> <li>- Section 12. Timeline</li> </ul>
UWM and Road Map	<p>For. Aggabao presented the proposed unit of work measure per PPA (Program, Projects, Activity) including the unit costing, performance indicator, and responsible office. She explained and discussed the following PPA:</p> <ul style="list-style-type: none"> <li>● Inventory and Identification of structures within</li> </ul>



Topics	Salient Discussions
	forestland; <ul style="list-style-type: none"> <li>• Team Composition;</li> <li>• Capacity Building</li> <li>• Processing and consolidation of universe</li> <li>• Inventory of structures using satellite image analysis</li> <li>• Processing and consolidation of data collected</li> <li>• Preparation of Final Report</li> <li>• Hiring of Personnel</li> <li>• Procurement of equipment and devices</li> </ul>
Summary of Agreements and Ways Forward	For. Aggabao and For. Tabliga presented and discussed the agreements and ways forward in Cluster 1 and Cluster 2, respectively.

## VII. FINDINGS

No end-of-learning event participants' evaluation was undertaken since this is a consultation/orientation workshop.

## VIII. CONCLUSION

This consultation workshop was conducted to uphold the policies and programs of the Department in protecting the forest lands and monitoring the utilization of its resources. The draft Department Administrative Order on the *Guidelines in the Inventory of Structures within Forestland* shall guide DENR Field personnel in the conduct of inventory of structures within forest lands through the use of different geospatial technologies. Three (3) major methodologies will be used in the inventory of structures within six (6) locations categorized by land cover. The methodologies to be used are 1) Satellite Image Analysis for CADT areas, other land covers and forest covers with above 18% slope; 2) Drone Image Analysis and 3) ODCI Survey for perennial cropland and forest cover with below 18% slope. For the inventory within tenure, the data will be derived from the Tenure Compliance Monitoring conducted by the Enforcement Division.

The participants provided detailed-oriented insights and recommendations for the improvement of the draft policy. The draft DAO showcased the processing of the initial universe, the methodology to be used during the inventory for each classification, composition, roles and responsibilities of Technical Working Group and Ground Validation Teams. The participants appreciate the creation of survey tools using ArcGIS Survey 123, ArcGIS FieldMaps and Offline Data Kit (ODK) in lieu of using the traditional pen-and-paper methodology. The three (3) survey tools were user-friendly but ArcGIS Survey 123 was favorable during field activity because of data security, easier to use compared to ArcGIS FieldMaps, and because of its survey-centric features.



It was also concluded in each cluster that the Overall Lead for the RTWG will be the Assistant Regional Director for Technical Services who will have the responsibility to choose the lead division to facilitate and implement the activity.

The inventory of structures can provide baseline information on structures within forestlands that can be used as evidence in the formulation of laws or amendments of existing policies particularly on forest protection in addressing the proliferation of settlers and undocumented built-up. Support from the Local Government Units and other institutions would be a great contribution in its implementation. The activity will generate employment resulting in an improved economic condition. However, this will raise questions and pose threats to forest occupants particularly those who do not possess any permits and instruments which may limit the movements of field personnel during the conduct of activity. The result of the inventory promotes conservation, protection, and management of forest land and resources within.

## **IX. RECOMMENDATIONS**

The main issues raised during the two (2) workshops were the unit costing, performance indicator including report submission, and timeline of activities. It was recommended to consider the inflation rate in determining the unit costing of the activity. The hiring of skilled enumerators and database management officers are necessary due to insufficient or limited number of staff that will be mobilized in the conduct of the inventory. It was also recommended to revisit the data on forest land to generate the final initial universe that shall be vetted by the Regional Office through data reconciliation.

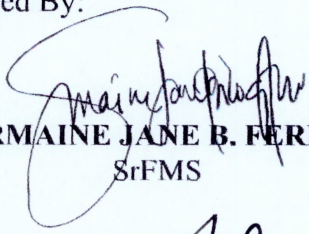
While waiting for the approval of the draft policy, capacity building or training of field offices in the use of drones, drone image analysis and offline data collection tool (ODCT) shall be conducted the following year. This training will prepare field personnel in the conduct of inventory once the draft DAO was approved. The implementation of the activity is tedious and laborious especially in identifying the structures within forest lands using different geospatial technologies.

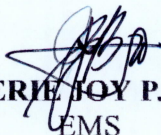


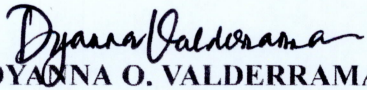
## X. ATTACHMENTS

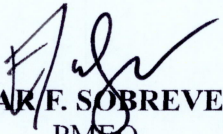
- Annex 1. Special Order
- Annex 2. Training Design
- Annex 3. Attendance Sheets
- Annex 4. Session Outputs
- Annex 5. Photo Documentation

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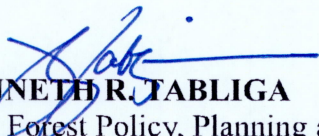
  
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and Director, in concurrent capacity



## SWOT ANALYSIS

Workshop on the Inventory of Structures within Forestlands

Cluster 1 | 10 -13 October 2023 | Baguio City

Cluster 2 | 24-27 October | Mandaue City

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> <li>• Aids in planning and crafting policies on forest protection on how to address existing built-up areas within forestlands and alleviate its expansion</li> <li>• Aids in the determination of the structures, assessment and corrective measures for the targeted areas.</li> <li>• Provides baseline information on structures within forestlands</li> <li>• Can be used offline under canopy/ near obstruction</li> <li>• This would make an evidence-based decision for policy-making.</li> <li>• Supports enforcement activities of the DENR in the forestlands.</li> <li>• Implements information support system useful for planning and development decision- making</li> <li>• Evidence that can be submitted to the Congress for future formulation of laws or amendments of existing policies.</li> <li>• Maximize the use of available technology for the efficient utilization of user-friendly applications. The use of the available technology will expedite the process of achieving realistic baseline data on the structures within forestland</li> <li>• Provides clear implementing guidelines on the process of inventory of structures within the forestland maximized using digital/mobile applications.</li> </ul>	<ul style="list-style-type: none"> <li>• Full logistical support such as provision of equipment and hiring of technical field personnel can be costly</li> <li>• Downtime or maintenance of the servers can be a hindrance in uploading data to the portal.</li> <li>• Multi tasking of the personnel in the field offices who will implement and monitor the activity.</li> <li>• Lacking/Limited resource               <ul style="list-style-type: none"> <li>○ (a) Human resource i.e licensed drone operator, technical staff</li> <li>○ (b) Logistics/funds</li> </ul> </li> <li>• Lacks feedback mechanism on the result to the LGUs and communities concerned</li> <li>• Composition of Regional TWG and ground validation team (Field Office)</li> <li>• Identification of appropriate office to lead the inventory</li> <li>• Outdated available equipment such as drones, cellphones, that will entail additional cost for the operation.</li> <li>• Absence of specific provision on complementation strategies of all sectors involved in the inventory of structures within forestland to promote data and information sharing.</li> <li>• Overlapping tenurial instruments</li> </ul>



<ul style="list-style-type: none"> <li>• Utilizes advanced tools for better forest management</li> <li>• Eliminate the manual process of recording data and provide flexibility in data gathering, storage and automatic generation of data analysis.</li> <li>• Provides awareness to the communities regarding the implementation of DENR policies.</li> <li>• Complements the spatial planning activities of DENR Central.</li> </ul>	
OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> <li>• Provides for a modernized system of information gathering through online survey questionnaire</li> <li>• Capacitation of technical personnels in the use of new technology in collecting data in field.</li> <li>• Other threats in the forestland can also be monitored while conducting the inventory using ODCT.</li> <li>• Collaboration and partnership with other government agencies and private entities.</li> <li>• Supportive LGU in the actual conduct of activity</li> <li>• Will serve as a basis to show the extent forestland used for the other purposes and also show the extent of disturbances to the LGUs</li> <li>• Support of the MENROs, Provincial ENROs (LGU Counterpart)</li> <li>• Determination of actual number and type of structures in forestland as basis of policy formulation and decision making.</li> <li>• The activity will generate green jobs thereby improving economic conditions.</li> <li>• Improve the governance of forestland.</li> <li>• Opportunity for forest management collaboration from other stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Cloud server of ODCT Tool tested on field is limited to 5GB which may runout if huge data (Regional Data) comes in.</li> <li>• Presence of insurgencies</li> <li>• Political issues/pressures from politicians who are owners of structures within the forestland and tenured areas.</li> <li>• Increasing number/approval of CADTs</li> <li>• Occupants/CADT owners apprehension towards the activity.</li> <li>• Increasing number/approval of CADTs</li> <li>• Accessibility to the area (i.e Terrain, Security, Weather Condition)</li> <li>• Limitation of access due to FPIC concerns.</li> <li>• May uncover the extent of illegal forest activities</li> </ul>



## PESTLE ANALYSIS

Workshop on the Inventory of Structures within Forestlands

Cluster 1 | 10 -13 October 2023 | Baguio City

Cluster 2 | 24-27 October | Mandaue City

POLITICAL	ECONOMIC	SOCIAL	TECHNOLOGICAL	LEGAL	ENVIRONMENTAL
<ul style="list-style-type: none"> <li>The acceptance of public officials in the implementation of the inventory of structures.</li> <li>Aerial validation within areas with insurgency may pose danger.</li> <li>Other conflicts that may arise from contradicting and/or overlapping geopolitical boundaries at municipal and provincial level.</li> <li>Positive political impact of the policy is it resolves conflicts and issues between the implementing agencies (DENR)</li> </ul>	<ul style="list-style-type: none"> <li>The implementation of activity will generate employment in terms of hiring of personnel that will implement the activity.</li> <li>Increase economic contribution of forestry in terms of collection of users' fees</li> <li>Increase in government's budget allocation for</li> </ul>	<ul style="list-style-type: none"> <li>The acceptance and participation of forest communities during the implementation of activity may be challenging.</li> <li>Influx or increase of forest occupants can be addressed having a baseline data of structures and proper policy implementation</li> <li>Right's recognition in</li> </ul>	<ul style="list-style-type: none"> <li>Limited use and availability of drones.</li> <li>Availability of drone-mapping software.</li> <li>Limited capacity of DENR Field Personnel in drone piloting.</li> <li>Capacity development in terms of geospatial technologies.</li> <li>Increase level of awareness and appreciation of advance technologies in</li> </ul>	<ul style="list-style-type: none"> <li>The inventory of structures aids in the enforcement of forestry-related laws, rules and regulations such as PD 705, particularly in the monitoring of illegal activities within forestlands.</li> <li>Provides for the improvement of forest protection programs through issuance of guidelines that will serve as basis for the monitoring of the expansion of structures within forestlands.</li> <li>This DAO is prepared in consonance with the existing policy, hence, this is workable.</li> <li>Baseline data to be produced may aid in improving the</li> </ul>	<ul style="list-style-type: none"> <li>The construction of structures within forestlands entails clearing of areas (tree cutting, kaingin, etc.) which may pose adverse environmental impacts to forest lands and forest resources.</li> <li>Can provide science-based evidence in addressing community, biodiversity and social impacts of climate change as well as improve adaptation strategies to be implemented</li> <li>The baseline data</li> </ul>



## Annex 6. Photo Documentation



**Image A6-1.** The Assistant Secretary for Field Operations - Western Mindanao and Director in concurrent capacity, ASec. Arleigh J. Adorable, during his Opening Remarks for the conduct of Workshop on the Inventory of Structures within Forestlands (Cluster 1).



**Image A6-2.** The section chief of the Forest Geospatial Data Infrastructure Section, Forester Larlyn Faith C. Aggabao, during the presentation of Rationale and Workshop Overview (Cluster 1).





**Image A6-3.** The participants for the conduct of Workshop on the Inventory of Structures within Forestlands (Cluster 1).



**Image A6-4.** The Assistant Regional Executive Director for Technical Services of Region 7, Forester Charlie E. Fabre, during his Welcome Remarks for the conduct of Workshop on the Inventory of Structures within Forestlands (Cluster 2).





**Image A6-5.** The participants for the conduct of Workshop on the Inventory of Structures within Forestlands (Cluster 2).



Attachment 2: Initial Universe by Region

REGION	TOTAL UNIVERSE	ODCT			SATELLITE IMAGE ANALYSIS				TENURE COMPLIANCE MONITORING
		TOTAL	FOREST COVER WITH 0-18% SLOPE	PERENNIAL CROPLAND	TOTAL	FOREST COVER WITH ABOVE 18% SLOPE	OTHER LAND COVER TYPE	CADT	Tenure outside PA
CAR	1,504,849.10	34,590.04	31,548.36	3,041.68	1,355,324.45	552,593.41	513,907.07	288,823.97	114,934.60
1	475,655.89	4,352.90	3,537.72	816.73	414,683.45	120,349.18	237,376.02	56,958.24	56,617.99
2	1,171,443.54	40,701.13	27,991.70	12,709.43	813,708.64	149,734.49	319,215.44	344,758.71	317,033.76
3	954,457.78	49,867.67	37,384.01	12,483.66	764,811.97	263,120.82	317,920.86	183,770.29	139,778.15
4A	377,973.14	85,537.31	7,166.12	78,371.19	257,964.39	48,390.48	92,184.58	117,389.33	34,471.45
4B	1,617,230.31	219,618.17	147,314.31	72,303.86	1,310,962.31	456,890.55	570,094.90	283,976.86	86,650.19
5	452,563.94	171,744.32	34,572.81	137,171.50	230,123.90	40,674.10	181,312.07	8,137.73	50,695.75
6	589,096.70	32,455.16	4,542.57	27,912.59	505,962.60	96,218.05	360,708.43	49,036.12	50,679.05
7	455,194.83	73,296.61	4,606.31	68,690.30	306,079.71	26,595.17	274,544.94	4,939.60	75,818.53
8	690,736.77	244,537.55	33,557.85	210,979.70	372,396.06	157,232.64	215,163.42	0	73,802.85
9	781,782.36	189,973.35	6,484.64	183,488.71	420,579.14	40,175.32	257,827.08	122,576.74	171,229.93
10	776,956.65	71,023.04	16,274.02	54,749.02	479,794.46	100,928.14	216,386.30	162,480.02	226,139.22
11	1,077,771.35	84,112.01	2,187.99	81,924.02	721,206.30	38,067.48	74,913.54	608,225.28	272,453.09
12	1,012,638.00	62,502.81	11,443.32	51,059.49	804,443.93	67,555.01	270,860.54	466,028.38	145,691.31
13	1,235,262.04	128,108.33	40,625.09	87,483.24	691,386.17	153,960.99	177,853.88	359,571.30	415,767.69
TOTAL	13,173,612.40	1,492,421.95	409,236.83	1,083,185.12	9,449,427.49	2,312,485.85	4,080,269.07	3,056,672.57	2,231,763.56



Attachment 3: Format/Template for equipment and personnel inventory

*Inventory of Operational Drone*

<i>Office</i>	<i>Program/Project</i>	<i>Number of Drone</i>	<i>Status</i>
<i>Regional Office</i>			
<i>PENRO</i>			
<i>CENRO</i>			

*Inventory of Personnel*

<i>Office</i>	<i>Division</i>	<i>Number of Technical Personnel that will be involved in the conduct of Inventory of Structures</i>
<i>Regional Office</i>	<i>CDD</i>	
	<i>LPDD</i>	
	<i>ED</i>	
	<i>SMD</i>	
	<i>PMD</i>	
<i>PENRO</i>		
<i>CENRO</i>		