Field Manual

National Forest Inventory in Papua New Guinea

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Field Measurement Manual

Presentation Outline

- 1. Introduction
- 2. Objective
- 3. Plot Location
- 4. Plot Layout
- 5. Measurement Parameters
- 6. Tree Measurement methods
- 7. Field sheets

1. Introduction

• Field Measurement Manual for the Multipurpose National Forest inventory in Papua New Guinea.

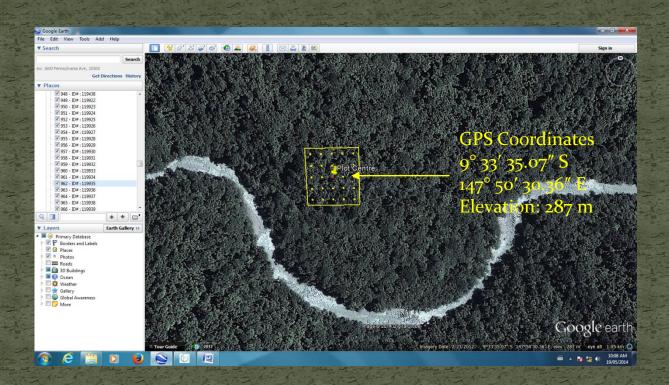
2. Objective

The basic aim is to provide a set of

 field measurement guidelines to assist field officers and technical staff in measuring trees, (live, dead standing & fallen) to quantify the amount of above ground biomass/carbon.

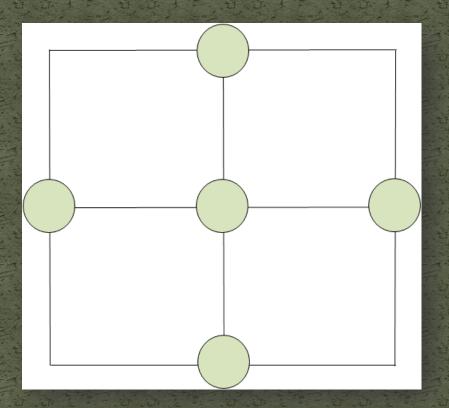
3. Field measurement

- Accessing the Plot: Air, sea, road
- Locating the Plot: Use of GPS

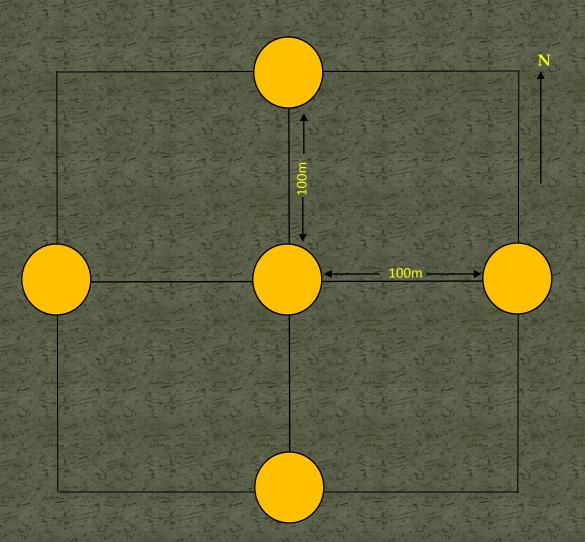


4. Field measurement

- Setting up of the Plot
- Plot Layout (Circular Plot)
- Cluster (5)

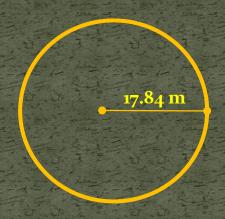


Plot Dimensions



Plot Size

Main Plot (Plot A)
Plot radius of 17.84 m
Measure all trees ≥ 50 cm dbh

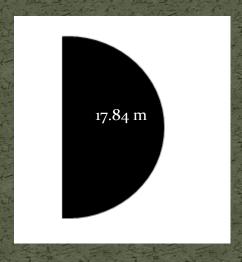


Plot size

Sub-plot1 (Plot B)

Plot radius: 17.84 m

Measure all trees ≥30 cm dbh (half the size of main plot)



Sub plot 2 (Plot C)

Plot radius: 12.62 m

Measure trees 10-29 cm dbh (Poles)



12.62m

Sub plot 3 (Plot D)

Plot radius: 8.0 m Measure saplings 5-9.9cm Seedling: Regeneration count (tally)



5. Sampling plot and sub-plot Measurement parameters

Plot Type	Plot Shape	Plot	Size	Tree Size	Information Collected			
		m²	ha					
Main Plot (All Sampling Units)	17.84m	1000	0.1	Measure all trees > 50 cm dbh	Species, dbh, height,			
Sub plot 1 (All Sampling Units)	17.84m	500	0.05	Measure all trees >30 cm dbh	Species, dbh, height			
Sub plot 2 (All Sampling Units)	12.62m	125	0.0125	Measure all poles >10 cm dbh	Species, dbh			
Sub plot 3 (All Sampling Units)	8m	50	0.005	Count number of seedlings dbh < 5 cm and height > 1.5 m	Species groups			

6. Parameters to be measured

Diameter (dbh) in cm Height (m): using clinometer & height pole Length (lying deadwood)

Diameter measurement

Common scenarios encountered







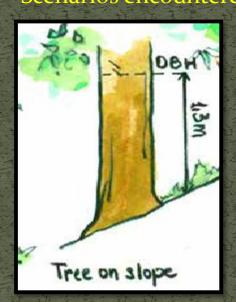
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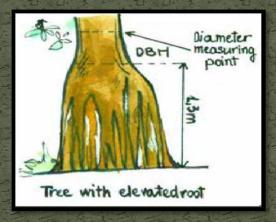
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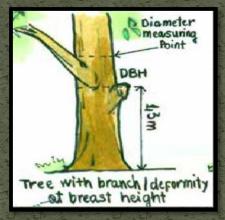


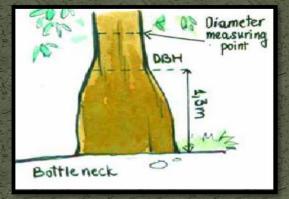
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Measurement Parameters Scenarios encountered



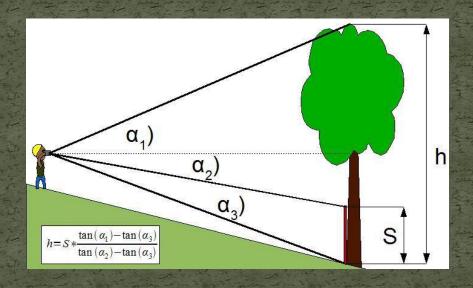






Height Measurement

Tree Height Measurement
 Using clinometer and height pole



7. Field sheets

Four (4) field sheets, one for each plot type.



PNG Forest Authority Multi-purpose National Forest Inventory Field sheet

Main Plot A: (20 meters x 20 meters)

Plants≥30 cm d.b.h

Live Trees, Palms, Vines, Dead wood standing & Dead wood Fallen

Surve	y Date	::	Location:					Province:								
CDS Deints				Accessibility to site:					Recorder:							
GPS Points:				Ave. Rainfall:					Team Leader:							
Eleva	tion:		General soil type (s):				Botanist:									
Plot#	:(ID):						Team members:									
Asped	et:		Forest Type:													
Plot t	ype:															
Qua -	Tree	Species	DE	внов	Stem		H	leight mea	surement	ts		Comm.	NTFP	Plant	Tree Condition	
drate	No.	Code	POM	Diameter	Form	Clinon	neter Angl	es (degre	es) ± ° Direct Ht. m/ment (m			Value		Form	Remarks	
			(m)	(cm)		Base 10m Merch H			Total Ht.	Merch Ht	Total Ht.	C/NC				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	

l Qi	ла - I	Tree	Species	DE	внов	Stem	neight measurements						Comm.	NTFP	Plant	Tree Condition
dr	ate	No.	Code	POM	Diameter	Form	Clinometer Angles (degrees) ± °			Direct Ht.	n/ment (m Value			Form	Remarks	
				(m)	(cm)		Base	10m	Merch Ht	Total Ht.	Merch Ht	Total Ht.	C/NC			
	1	2	3	4	5	60	7	8	9	10	11	12	13	14	15	16
0	0	1	Pometia pinnata	1.3	25.7	В	5	26	32	74			С			Broken Top
		2														
		3														
		4														
		5														
		6														
		7														
		8														

Data analysis

- Data entry
- Data Analysis

Open Foris Collect (Calc)

Thank you...