

GLOBE

bo makegonija

ГЛОБАЛНО УЧЕЊЕ И НАБЉУДУВАЊЕ ВО ПОЛЗА НА ЖИВОТНАТА СРЕДИНА

ФОРМУЛАРИ ЗА ВНЕСУВАЊЕ ПОДАТОЦИ

МИНИСТЕРСТВО ЗА ЖИВОТНА СРЕДИНА И ПРОСТОРНО ПЛАНИРАЊЕ

МАКЕДОНСКИ ИНФОРМАТИВЕН ЦЕНТАР ЗА ЖИВОТНА СРЕДИНА

Land Cover Investigation

Sample Site Data Sheet

School Name: _____
 Measurement Time: _____ Year _____ Month _____ Day _____ Hour (UT) _____
 Recorded By: _____

_____ _____ _____ _____

LOCATION

Site Name: _____
 City/State/Country: _____

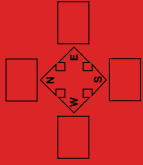
Latitude	Longitude	Elevation
decimal degrees <input type="checkbox"/> North <input type="checkbox"/> South <input type="checkbox"/> East <input type="checkbox"/> West	decimal degrees	_____ meters

MUC TO THE MOST DETAILED LEVEL

MUC Class: _____
 MUC Land Cover Type Name: _____

 METADATA (Comments)

PHOTO NUMBER AND ORIENTATION



Land Cover Investigation

Tree Canopy and Ground Cover Data Sheet*

School Name: _____ Site: _____
 Measurement Time: _____ Year _____ Month _____ Day _____ Hour (UT) _____
 Recorded By: _____

1. Canopy Observations + = Tree Canopy - = Sky or Shrub	2. Canopy Species or Common Name	3. Canopy Type E = Evergreen D = Deciduous - = Sky	4. Ground Observations G = Green Cover B = Bare Ground - = NO Cover	5. Ground Vegetation Type Type T1 = Grassland T2 = Shrubland T3 = Sparse Green Veg T4 = Bare/Shrub
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22				
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24				
25				

1. Canopy Observations + = Shrub Canopy - = Sky or Bare	2. Canopy Species or Common Name	3. Canopy Type E = Evergreen D = Deciduous - = Sky	4. Ground Observations G = Green Cover B = Brown Cover - = No Cover	5. Ground Vegetation Type Gr = Grass Fb = Forb Sh = Shrub DS = Dwarf Shrub GDD = Graminoid - = No Cover
26				
27				
28				
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				

Summary of Tree Canopy Observations	Summary of Canopy Type	Summary of Ground Observations	Summary of Ground Vegetation Type
Total "+"	Total "E"	Total "G"	Total "Gr"
Total "-"	Total "D"	Total "B"	Total "Fb"
Total Canopy Observations	Total Canopy Type Observations	Total "G"	Total "Sh"
% Tree Canopy	% Evergreen (E)	% Ground	Total "DS"
	% Deciduous (D)		Total Ground Type Observations
			% Graminoid (GD)
			% Forb (FB)
			% Other Green (OG)
			% Shrub (SB)
			% Dwarf Shrub (DS)

*Note: Always measure the highest level of canopy. In a forest or woodland, canopy cover refers to the tree canopy.

Land Cover Investigation

Shrub Canopy and Ground Cover Data Sheet*

School Name: _____ Site: _____

Measurement Time: _____ Year _____ Month _____ Day _____ Hour (UT) _____

Recorded By: _____

Use this column to determine the Dominant Shrub Canopy	Use this column to determine MLC for Shrubland	Use this column to determine Dominant Ground Vegetation Type	Use this column to determine Canopy Observations	Use this column to determine Total Status
1. Canopy Observations + = Shrub Canopy - = Sky or Bare	3. Canopy Type E = Evergreen D = Deciduous - = Sky	5. Ground Vegetation Type Gr = Graminoid Fb = Forb Sh = Shrub DS = Dwarf Shrub - = No Cover	4. Ground Observations G = Green Cover B = Brown Cover - = No Cover	6. Put a "+" in this column if there is a Canopy, or an "SF" if there are no canopy observations. If there are no shrubs present
1				
2				
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22				
23				
24				
25				

1. Canopy Observations (Tree)	2. Canopy Species or Common Name	3. Canopy Type E = Emergent M = Midstorey S = Sky	4. Ground Observations G = Grass B = Brown Cover - = No Cover	5. Ground Vegetation G = Grass D = Deciduous S = Shrub P = Dwarf Shrub	6. Either a "2" in Column 3 or a "P" in Column 5 Put a "-" if there were no shrubs or dwarf shrubs.
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					

Summary of Shrub Canopy Observations	
Total "E"	
Total "M"	
Total "S"	
Total Canopy Observations	
% Shrub Canopy	

Summary of Canopy Type	
Total "E"	
Total "M"	
Total "S"	
Total Canopy Type Observations	
% Evergreen (E)	
% Deciduous (D)	

Summary of Ground Observations	
Total "G"	
Total "B"	
Total "-"	
Total Ground Observations	
% Ground	

Summary of Ground Vegetation Type	
Total "GD"	
Total "FB"	
Total "OG"	
Total "SF"	
Total "DS"	
Total Ground Type Observations	
% Graminoid (GD)	
% Forb (FB)	
% Other Green (OG)	
% Strub (SF)	
% Dwarf Strub (DS)	

*Note: Always measure the highest level of canopy. In a shrubland, canopy cover refers to the shrub canopy.

Land Cover Investigation

Graminoid, Tree and Shrub Height Data Sheet

School Name: _____ Site: _____
 Measurement Time: _____ Year _____ Month _____ Day _____ Hour (UT) _____
 Recorded By: _____

Climometer Data

*Dominant Species	Climometer Reading (°)	TAN of Clinometer Reading	Distance from Tree (m)	Eye Height (m)	*Vegetation Height (m)	*Average Height (m)
Specimen 1.						
Specimen 2.						
Specimen 3.						
Specimen 4.						
Specimen 5.						

*Co-Dominant Species	Climometer Reading (°)	TAN of Clinometer Reading	Distance from Tree (m)	Eye Height (m)	*Vegetation Height (m)	*Average Height (m)
Specimen 1.						
Specimen 2.						
Specimen 3.						
Specimen 4.						
Specimen 5.						

$$\text{Tree Height} = (\text{TAN of Clinometer Reading} \times \text{Distance from Tree}) + \text{Eye Height}$$

Note: Measure each tree three times and average the three height values. If all three values are within 1 meter of the average, report the values. If not, repeat the measurements until they are within 1 meter of their average, and then report these values.

* Use these columns for measuring the height of graminoids, shrubs, and dwarf shrubs. Use all the columns if you use your clinometer to measure height.

Land Cover Investigation

Measure Tree Height on Level Ground: Simplified Clinometer Technique Data Sheet

School Name: _____ Site: _____
 Measurement Time: _____ Year _____ Month _____ Day _____ Hour (UT) _____
 Recorded By: _____

Clinometer Data

Dominant Species	Clinometer Reading (°)	Tree Height (m) (Distance from Base of Tree (m) and Up to Eyes)	Average Tree Height (m)
Specimen 1.	45°		
Specimen 2.	45°		
Specimen 3.	45°		
Specimen 4.	45°		
Specimen 5.	45°		

Co-Dominant Species	Clinometer Reading (°)	Tree Height (m) (Distance from Base of Tree (m) and Up to Eyes)	Average Tree Height (m)
Specimen 1.	45°		
Specimen 2.	45°		
Specimen 3.	45°		
Specimen 4.	45°		
Specimen 5.	45°		

Note: Measure each tree three times and average the three height values. If all three values are within 1 meter of the average, report the values. If not, repeat the measurements until they are within 1 meter of their average, and then report these values.

Land Cover Investigation

Measure Tree Height on a Slope: Stand by Tree Data Sheet

School Name: _____ Site: _____
 Measurement Time: _____ Year _____ Month _____ Day _____ Hour (UT) _____
 Recorded By: _____

Clinometer Data

Dominant Species	Clinometer Reading (°)	TAN of Clinometer Reading	Height to 0° on Tree (m)	Distance to Tree (m)	Tree Height (m)	Average Tree Height (m)
Specimen 1.						
Specimen 2.						
Specimen 3.						
Specimen 4.						
Specimen 5.						

Co-Dominant Species	Clinometer Reading (°)	TAN of Clinometer	Height to 0° on Tree (m)	Distance to Tree (m)	Tree Height (m)	Average Tree Height (m)
Specimen 1.						
Specimen 2.						
Specimen 3.						
Specimen 4.						
Specimen 5.						

$$\text{Tree Height} = [(\text{TAN of Clinometer Reading}) \times (\text{Distance to Tree})] + (\text{Height to } 0^\circ \text{ on Tree})$$

Note: Measure each tree three times and average the three height values. If all three values are within 1 meter of the average, report the values. If not, repeat the measurements until they are within 1 meter of their average, and then report these values.

Land Cover Investigation

Tree Circumference Data Sheet

School Name: _____ Site: _____
 Measurement Time: _____ Year _____ Month _____ Day _____ Hour (UT) _____
 Recorded By: _____

Tree Circumference Measurements

Dominant Species:	Tree circumference (cm)
1.	
2.	
3.	
4.	
5.	

Co-Dominant Species:	Tree circumference (cm)
1.	
2.	
3.	
4.	
5.	



Accuracy Assessment

Work Sheet

Site Name	Student Map Classification from GLOBE Study Site	Validation Data from Land Cover Sample Sites	✓	✗
1				
2				
3				
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12				
13				
14				
15				
16				