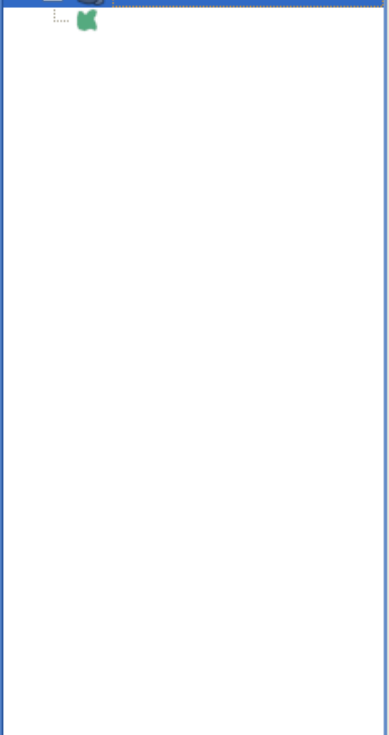


- Add Country Map (Vector – add vector layer – Tanzania.shp)
- Identify feature
- View layer properties (double-click name in layer window)
- Change style to Green background

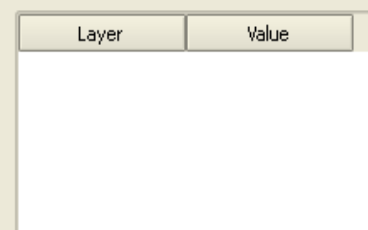


Layers

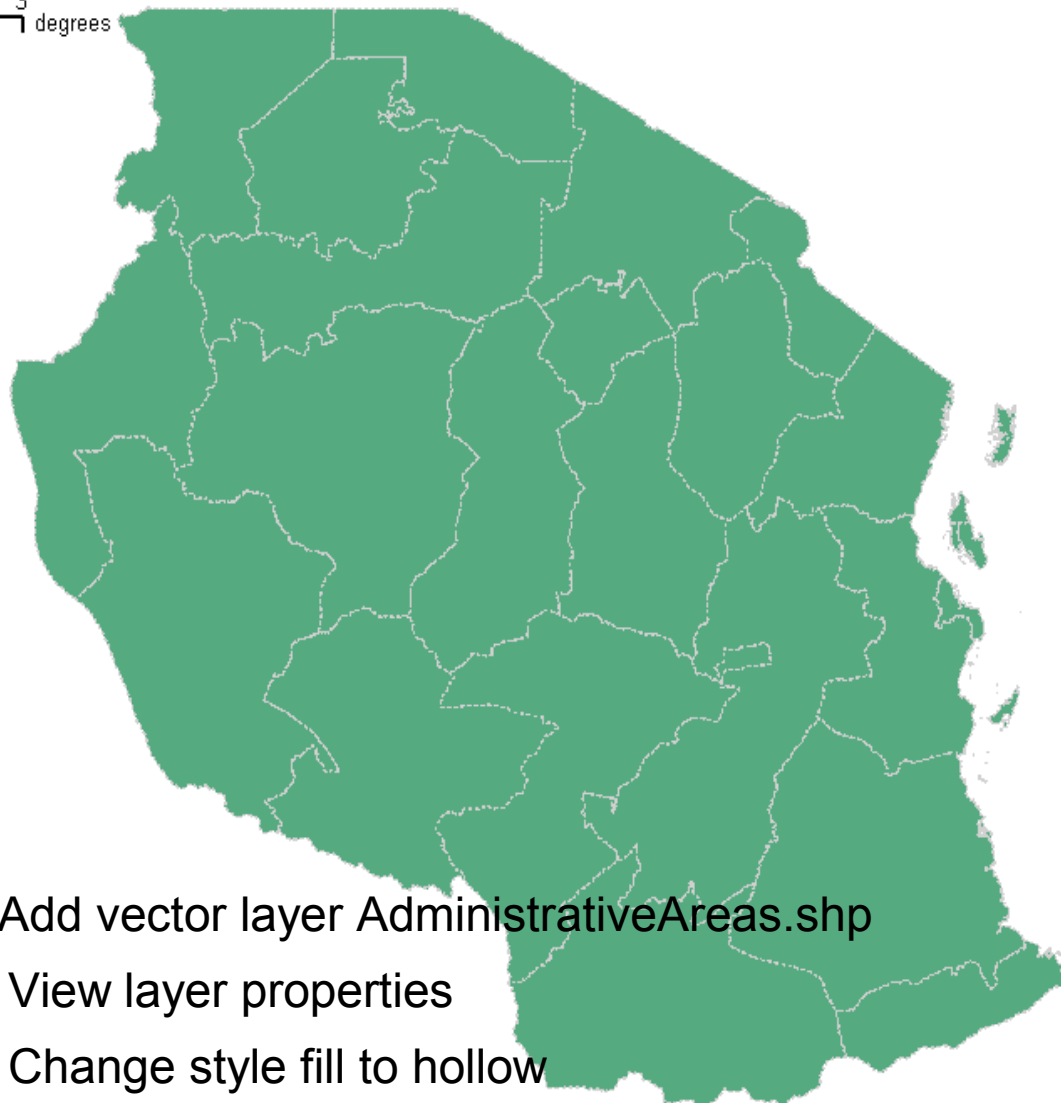
AdministrativeAreas



Value Tool

☒ Active (Shift+A) ☐ Graph

0 3 degrees



- Add vector layer AdministrativeAreas.shp
- View layer properties
- Change style fill to hollow



Coordinate:

26.31,-7.33

Scale

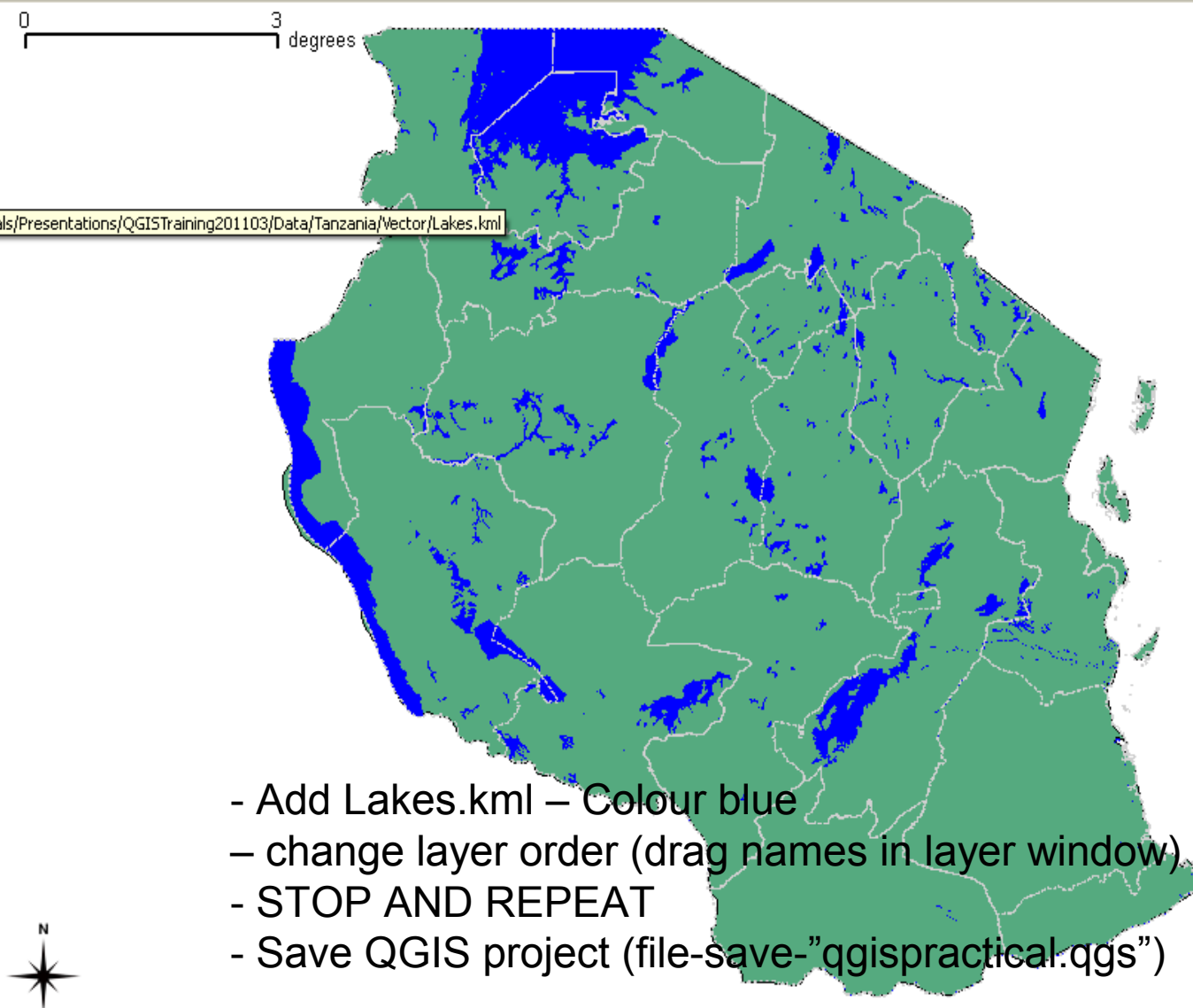
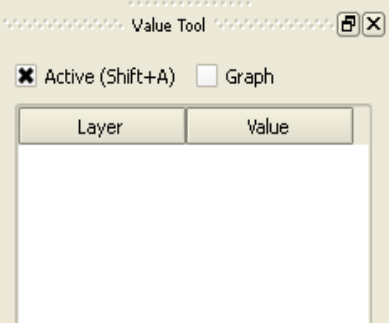
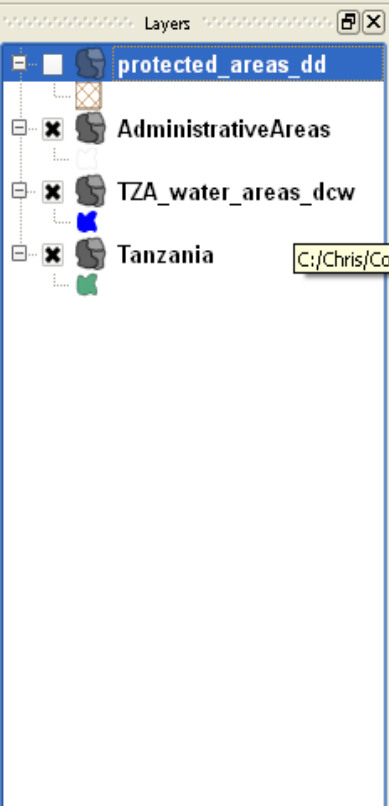
1:6835621



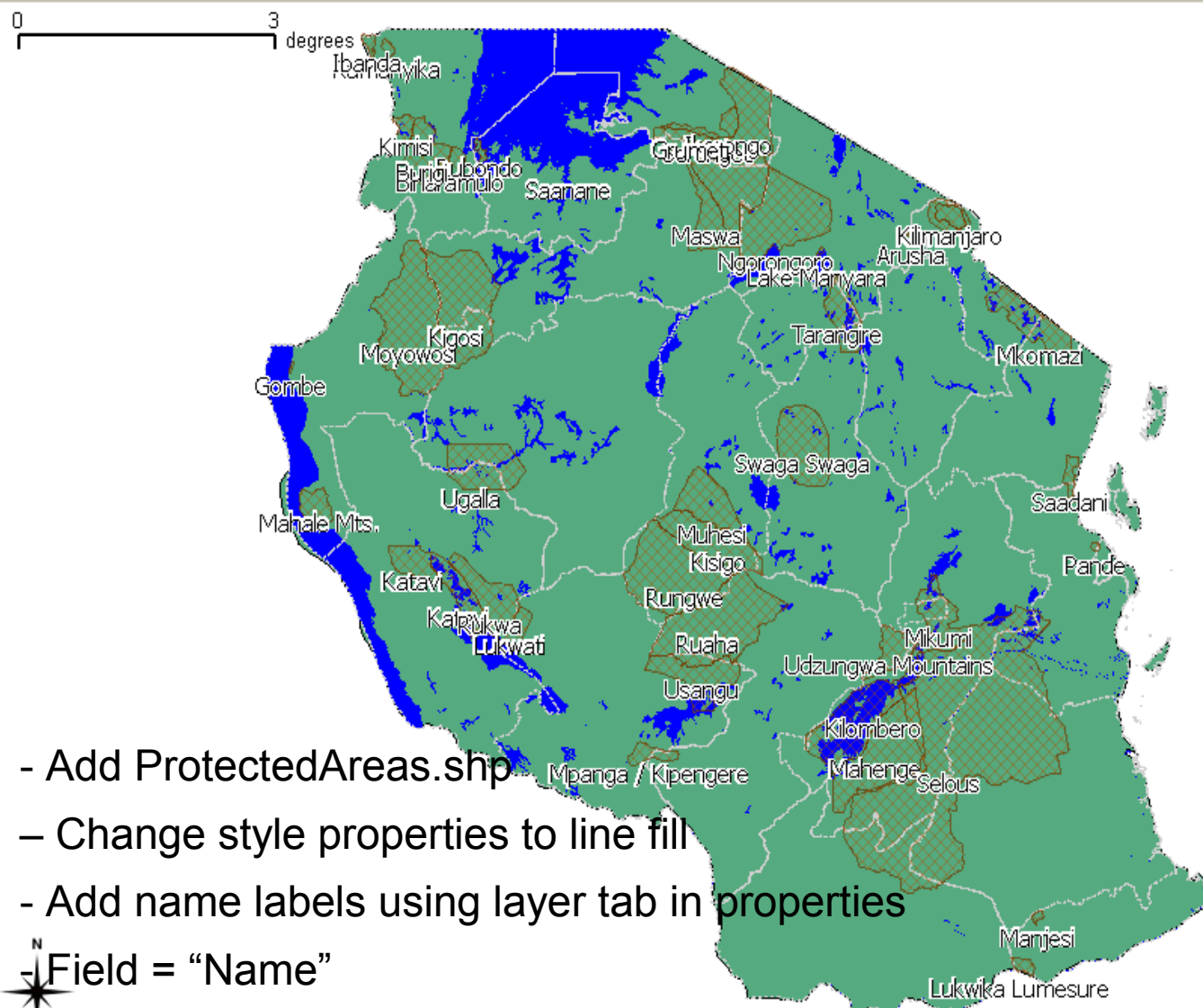
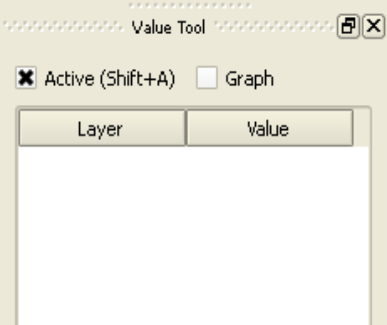
Render

EPSG:4326

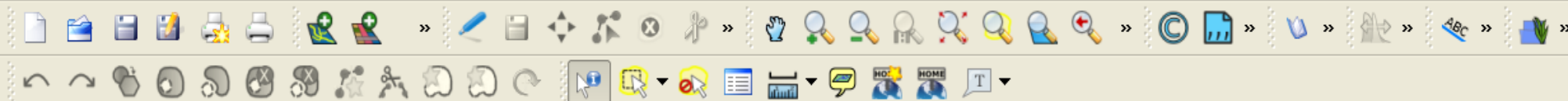




- Add Lakes.kml – Colour blue
- change layer order (drag names in layer window)
- STOP AND REPEAT
- Save QGIS project (file-save-”qgispractical.qgs”)



- Add ProtectedAreas.shp
- Change style properties to line fill
- Add name labels using layer tab in properties
- Field = "Name"
- Scroll down to set label buffer



Attribute table - protected_areas_dd :: 0 / 43 feature(s) selected

	AREA	PERIMETER	PARKSUTM_	PTCODE	PTNAME	REALAREA	CALCAREA	STATUS	NAME
0	13039488100.58...	728930.509638	4	215110	SERENGETI NATI...	14760	13039.488101	National Park	Serengeti
1	602742731.4817...	112846.672117	5	215205	IKORONGO GAM...	606.7505	602.742731	Game Reserve	Ikorongo
2	408989329.08512	200057.014634	7	215203	GRUMETI GAME ...	411.8861	408.989329	Game Reserve	Grumeti
3	2877910946.996...	351927.610324	10	215209	MASWA GAME R...	2180	2877.910947	Game Reserve	Maswa
4	8257859623.3448	455765.626447	11	215402	NGORONGORO ...	8280	8257.859623	Cons. Area	Ngorongoro
5	935748328.3707...	285129.174359	12	215207	KILIMANJARO G...	937.4915	935.748328	Game Reserve	Kilimanjaro
6	794915417.233635	127017.386916	13	215104	KILIMANJARO N...	756	794.915417	National Park	Kilimanjaro
7	111782167.69117	71629.92517	14	215101	ARUSHA NATION...	137	111.782168	National Park	Arusha
8	11410965178.89...	640085.957589	15	215211	MOYOWOSI GAM...	6000	11410.965179	Game Reserve	Moyowosi
9	108008459.9642...	79267.675139	16	215105	LAKE MANYARA ...	325	108.00846	National Park	Lake Manyara
10	2615796723.720...	238616.391082	18	215111	TARANGIRE NATI...	2600	2615.796724	National Park	Tarangire
11	3445684415.145...	338442.685282	19	215210	MKOMAZI GAME ...	3580	3445.684415	Game Reserve	Mkomazi
12	4744745728.241...	281298.827988	21	215217	UGALLA RIVER G...	4860	4744.745728	Game Reserve	Ugalla
13	3770446449.761...	308981.360735	22	215212	MUHESI GAME R...	0	3770.44645	Game Reserve	Muhesi
14	1465017536.5898	164027.150334	24	215106	MAHALE MTS NA...	1200	1465.017537	National Park	Mahale Mts.
15	5001808413.438...	406110.21876	25	215208	KISIGO GAME RE...	5035.387	5001.808413	Game Reserve	Kisigo
16	9103975379.6342	458300.18567	26	215214	RUNGWE GAME ...	9168.222	9103.97538	Game Reserve	Rungwe
17	1816680325.237...	188431.74839	27	215103	KATAVI NATIONA...	2250	1816.680325	National Park	Katavi
18	10537013801.46...	518137.187239	28	215108	RUAHA NATIONA...	10200	10537.013801	National Park	Ruaha
19	3233875723.911...	320400.04805	29	215107	Mikumi National P...	3230	3233.875761	National Park	Mikumi
20	8754079727.20292	457065.470744	33	0	MAHENGE	0	8754.079727	NULL	Mahenge

Look for

in

AREA

Search

☐ Show selected only
 ☐ Search selected only
 ☒ Case sensitive

Advanced search

?

Look at attribute table



Coordinate:

33.78,-11.03

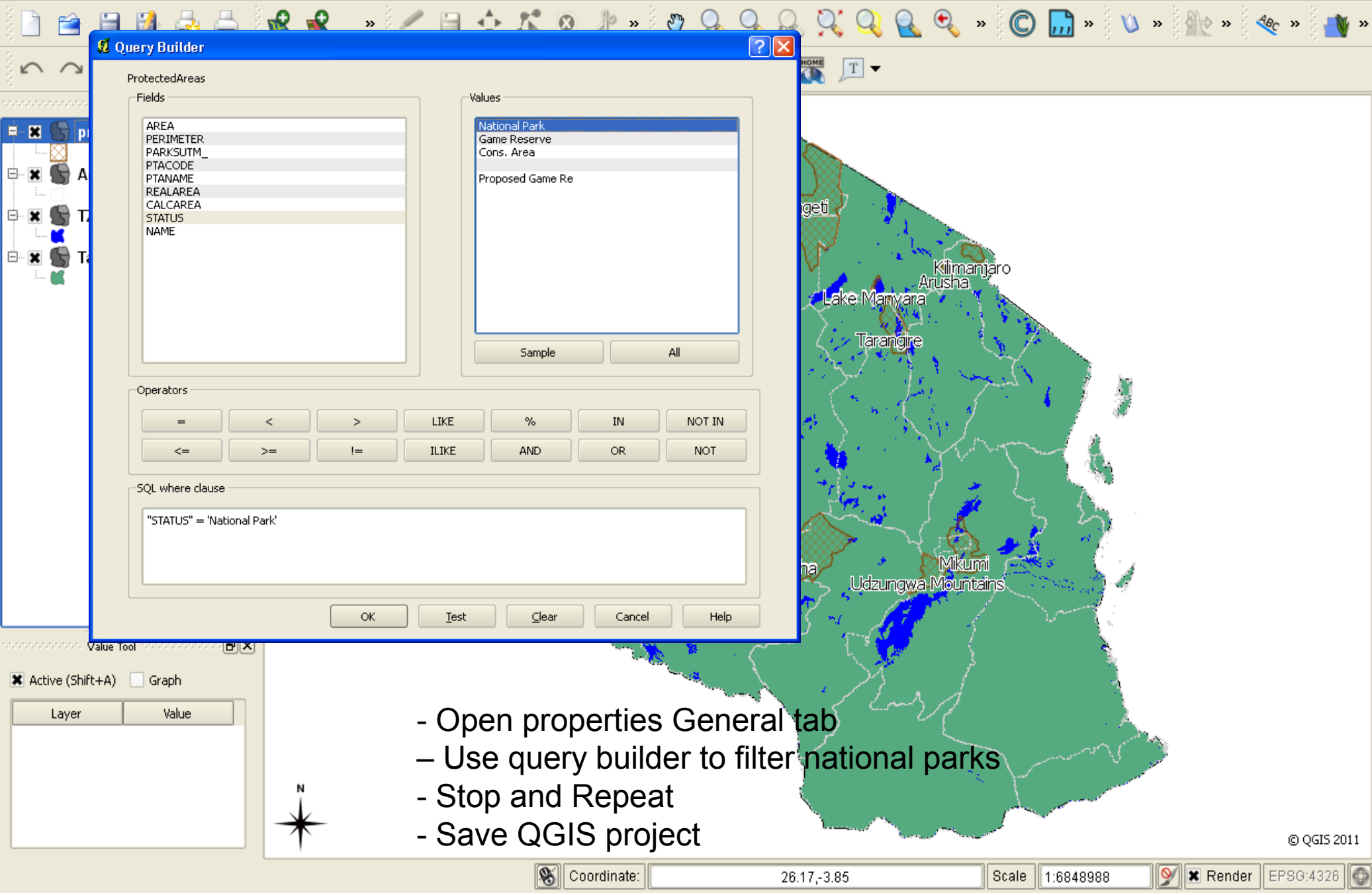
Scale

1:6848988



Render

EPSG:4326



Query Builder

ProtectedAreas

Fields

AREA
PERIMETER
PARKSUTM_
PTACODE
PTANAME
REALAREA
CALCAREA
STATUS
NAME

Values

National Park
Game Reserve
Cons. Area
Proposed Game Re

Sample All

Operators

=	<	>	LIKE	%	IN	NOT IN
<=	>=	!=	ILIKE	AND	OR	NOT

SQL where clause

"STATUS" = 'National Park'

OK Test Clear Cancel Help

Value Tool

☒ Active (Shift+A) ☐ Graph

Layer Value

Coordinate: 26.17,-3.85 Scale: 1:6848988 EPSG:4326

© QGIS 2011

- Open properties General tab
- Use query builder to filter national parks
- Stop and Repeat
- Save QGIS project

Create a Layer from a Delimited Text File

File Name: Teaching/GIS/ZSL201111/Data/Tanzania/Vector/Diospyros.txt Browse...

Layer name: Diospyros

☒ Selected delimiters
 ☒ Tab ☐ Space
☒ Comma ☐ Semicolon ☐ Colon

☐ Plain characters [,]
☐ Regular expression

Start import at row: 0

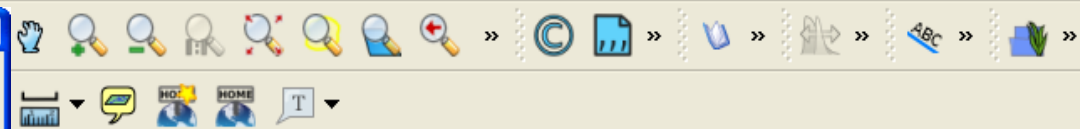
☒ X Y fields X field: lon Y field: lat
☐ WKT field

Decimal point:

Sample text

	#id	taxon	lon	lat
1	93600014	Diospyros loureiriana subsp...	37.08	-7.25
2	62609730	Diospyros loureiriana subsp...	38.93	-7
3	62608853	Diospyros loureiriana subsp...	35.75	-6.18

OK Cancel Help



- Add Specimens from tab delimited text
- Layer-delimited text-diospyros.txt
- Save as shape file (layer-save as-"diospyros.shp")
- Change colours
- Remove non-Tanzanian records
- Layer Toggle Editing
- Vector-Research Tools-Select by Location
- Select diospyros points within Tanzania

Value Tool

☒ Active (Shift+A) ☐ Graph

Layer Value



Layers

Diospyros_loureiriana

0 3 degrees

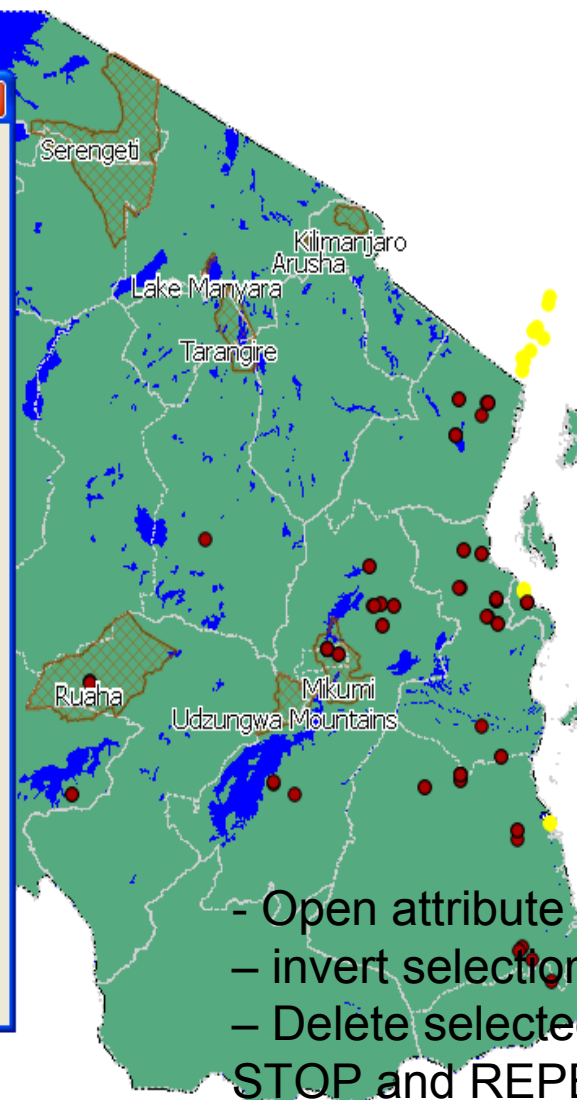
Attribute table - Diospyros_loureiriana :: 16 / 88 feature(s) selected

	accession	taxon	lon	lat	status
0	93600014	Diospyros loureiri...	37.080002	0	NULL
1	62609730	Diospyros loureiri...	38.93	0	NULL
2	62608853	Diospyros loureiri...	35.75	0	NULL
3	62609630	Diospyros loureiri...	38.959999	0	NULL
4	93601295	Diospyros loureiri...	39.220001	0	NULL
5	93600351	Diospyros loureiri...	38.529999	0	NULL
6	93600789	Diospyros loureiri...	39.279999	0	NULL
7	93600046	Diospyros loureiri...	39.5	0	NULL
8	62609469	Diospyros loureiri...	38.52	0	NULL
9	93600308	Diospyros loureiri...	39.150002	0	NULL
10	93600784	Diospyros loureiri...	39.200001	0	NULL
11	93600791	Diospyros loureiri...	39.5	0	NULL
12	93600016	Diospyros loureiri...	37.669998	0	NULL
13	93599016	Diospyros loureiri...	39.139999	0	NULL
14	93600999	Diospyros loureiri...	39.299999	0	NULL
15	93600321	Diospyros loureiri...	38.529999	0	NULL
16	93600798	Diospyros loureiri...	39.419998	0	NULL
17	93600342	Diospyros loureiri...	38.919998	0	NULL
18	93600781	Diospyros loureiri...	39.349998	0	NULL

Look for in accession Search

☐ Show selected only ☐ Search selected only ☒ Case sensitive

Advanced search ?



- Open attribute table
 - invert selection
 - Delete selected
 STOP and REPEAT
 Save project



General Item Command history

Legend items

☒ Auto Update

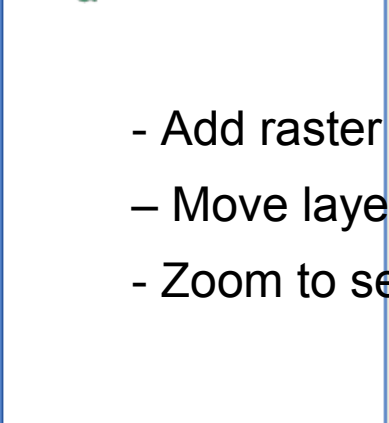
- + Diospyros specimens
- + protected_areas_dd
- + AdministrativeAreas
- + TZA_water_areas_dcw
- + Tanzania

 Update All Add group

Item Options

Close

Help



-
- Value Tool
- ☒ Active (Shift+A) ☐ Graph
- | | Layer | Value |
|---|---------------------------|---------------|
| 1 | BlueMarbleTanzania Band 1 | out of extent |
| 2 | BlueMarbleTanzania Band 2 | out of extent |
| 3 | BlueMarbleTanzania Band 3 | out of extent |





Layers

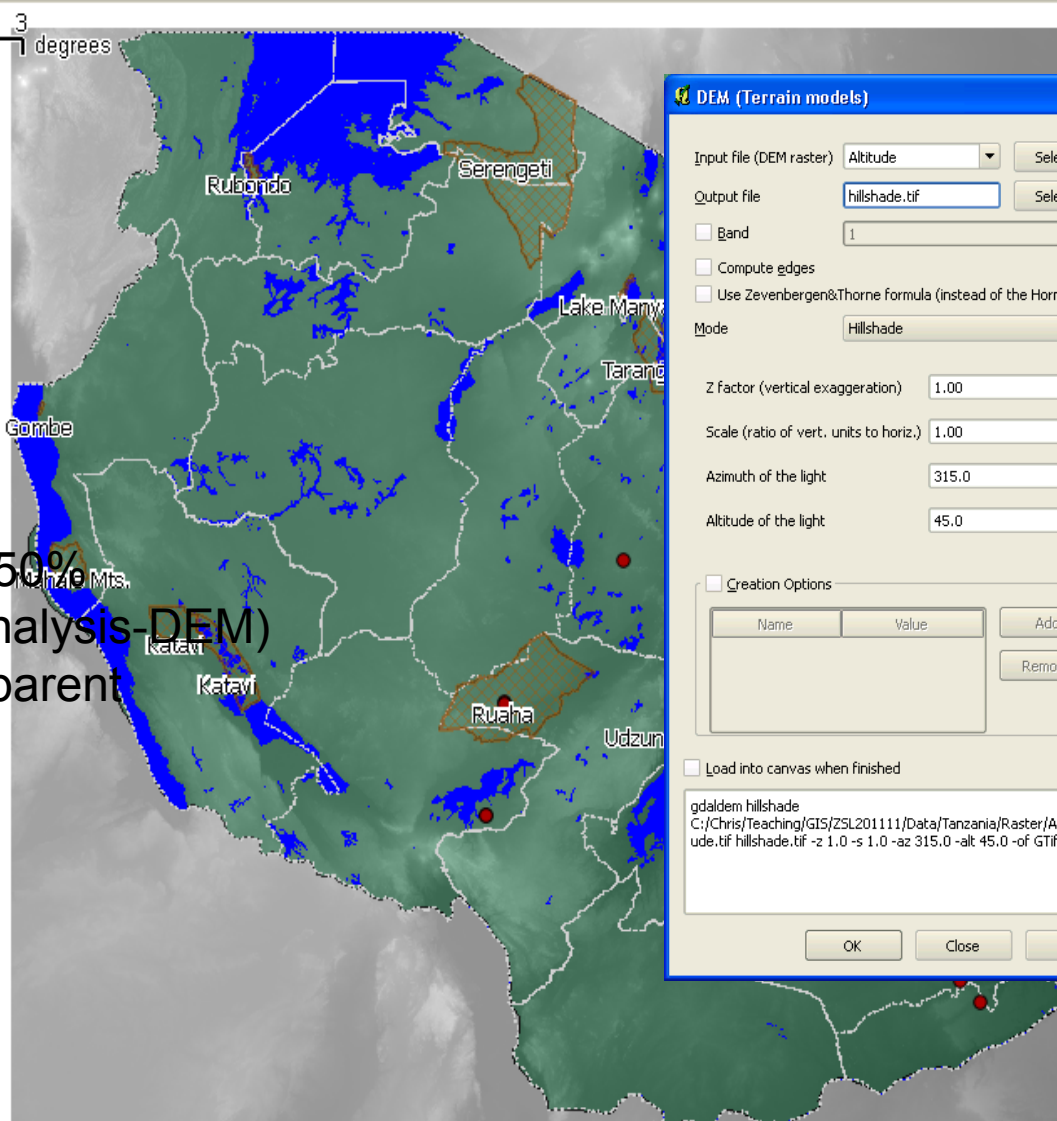
- Diospyros_loureiriana
- protected_areas_dd
- AdministrativeAreas
- TZA_water_areas_dcw
- Altitude
- BlueMarbleTanzania
- Hillshade**
- Tanzania

- Add raster altitude.tif
 - Properties-Transparency 50%
 - Create hillshade (Raster-analysis-DEM)
 - make hillshade 90% transparent
- SAVE, STOP and REPEAT

Value Tool

☒ Active (Shift+A) ☐ Graph

Layer	Value
1 Altitude	out of extent



DEM (Terrain models)

Input file (DEM raster): Altitude Select...

Output file: hillshade.tif Select...

☐ Band: 1

☐ Compute edges

☐ Use Zevenbergen&Thorne formula (instead of the Horn's one)

Mode: Hillshade

Z factor (vertical exaggeration): 1.00

Scale (ratio of vert. units to horiz.): 1.00

Azimuth of the light: 315.0

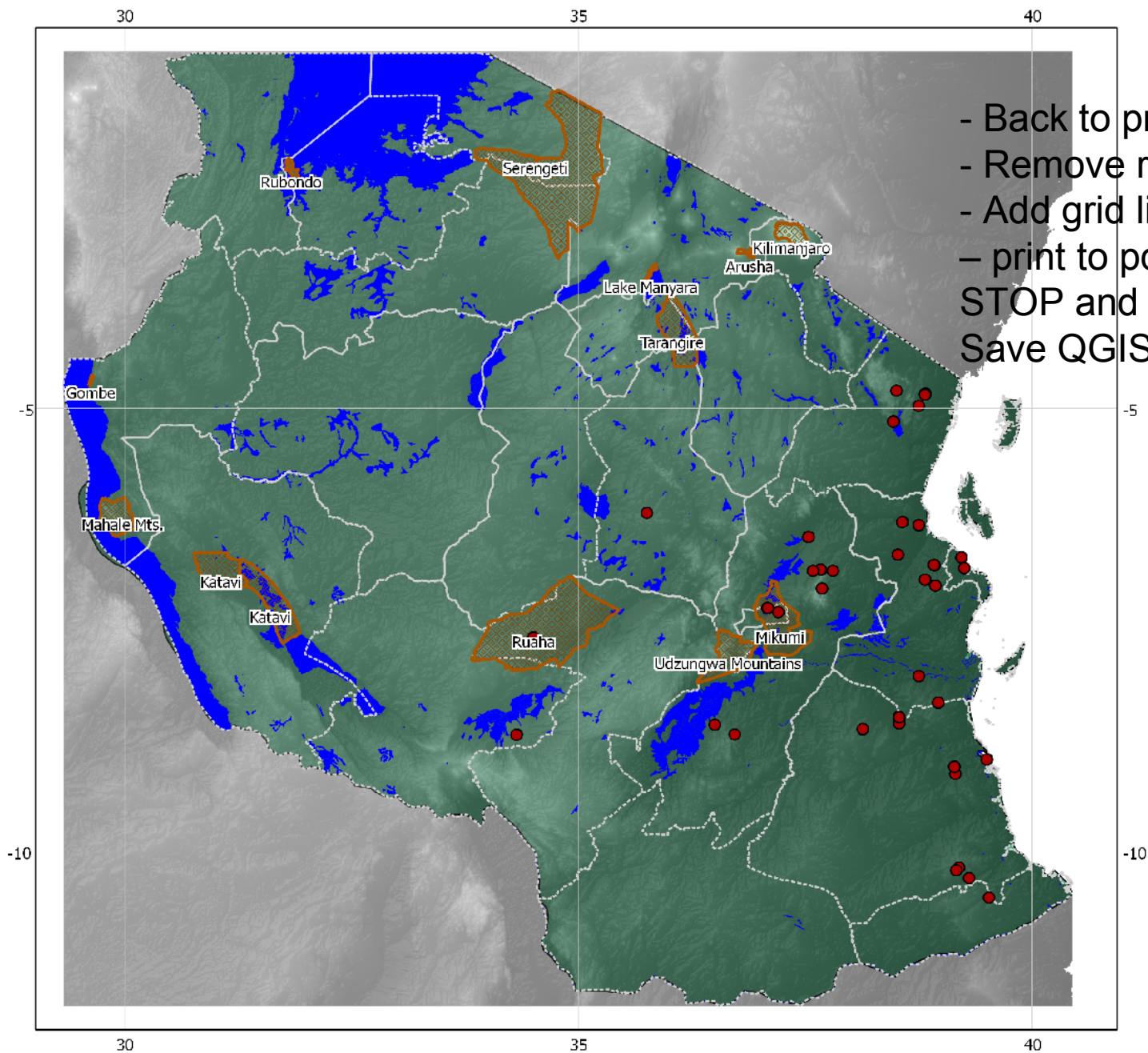
Altitude of the light: 45.0

☐ Creation Options

Name	Value
------	-------

☐ Load into canvas when finished

gdaldem hillshade
C:/Chris/Teaching/GIS/ZSL201111/Data/Tanzania/Raster/Altitude.tif hillshade.tif -z 1.0 -s 1.0 -az 315.0 -alt 45.0 -of GTiff



- Back to print window
 - Remove raster layers from legend
 - Add grid lines
 - print to pdf/image
- STOP and REPEAT
- Save QGIS file

