NDVI and Elevation:
A Study of Chiapas, Mexico

Mansi Kalra and Grant Storer

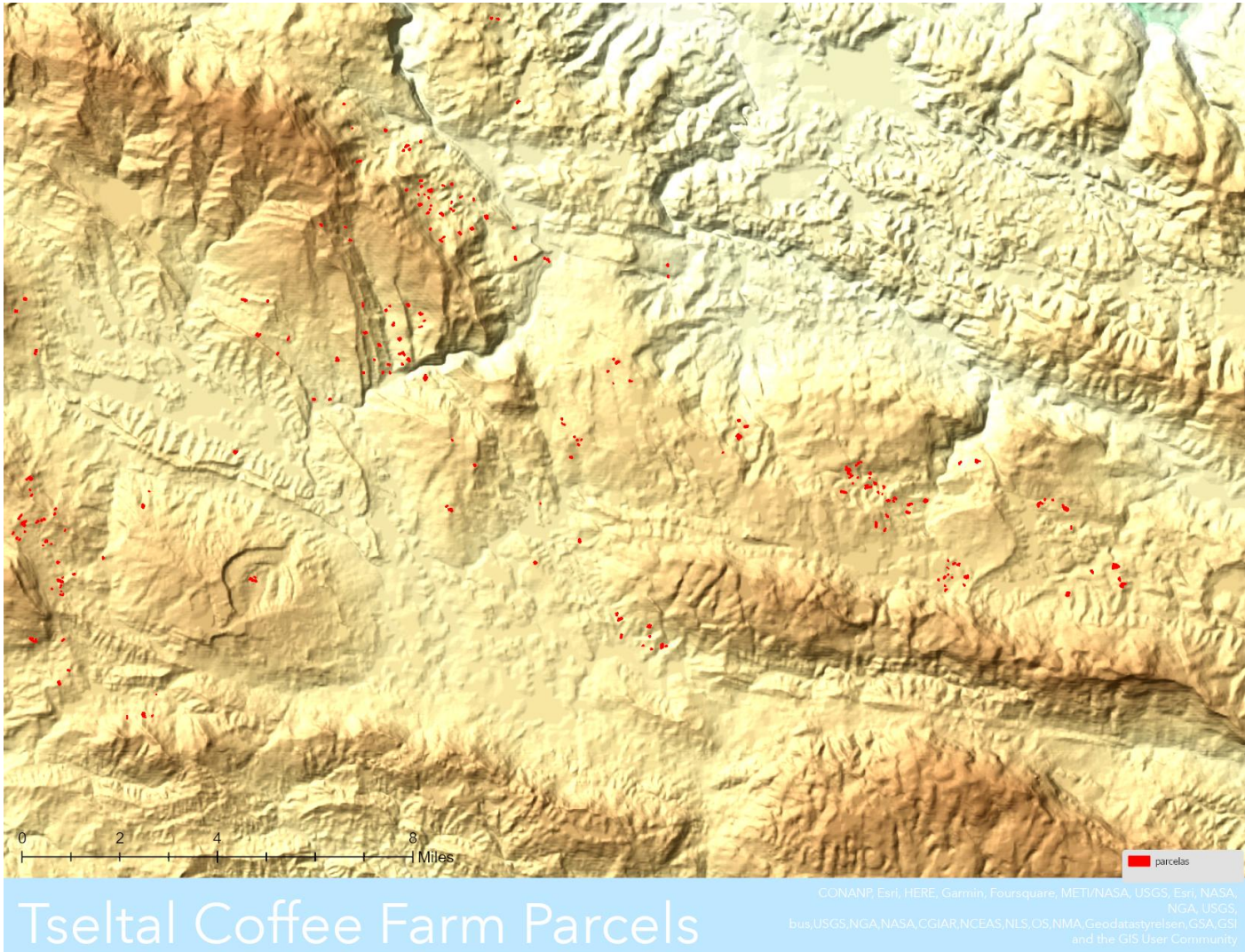
Context and Question

- Chiapas is a Mexican state that is known for its coffee production
- NDVI: Normalized difference vegetation index
- Coffee Leaf Rust is a primary risk
- Higher elevation may be less risky
- Do NDVI values change in regards to elevation?

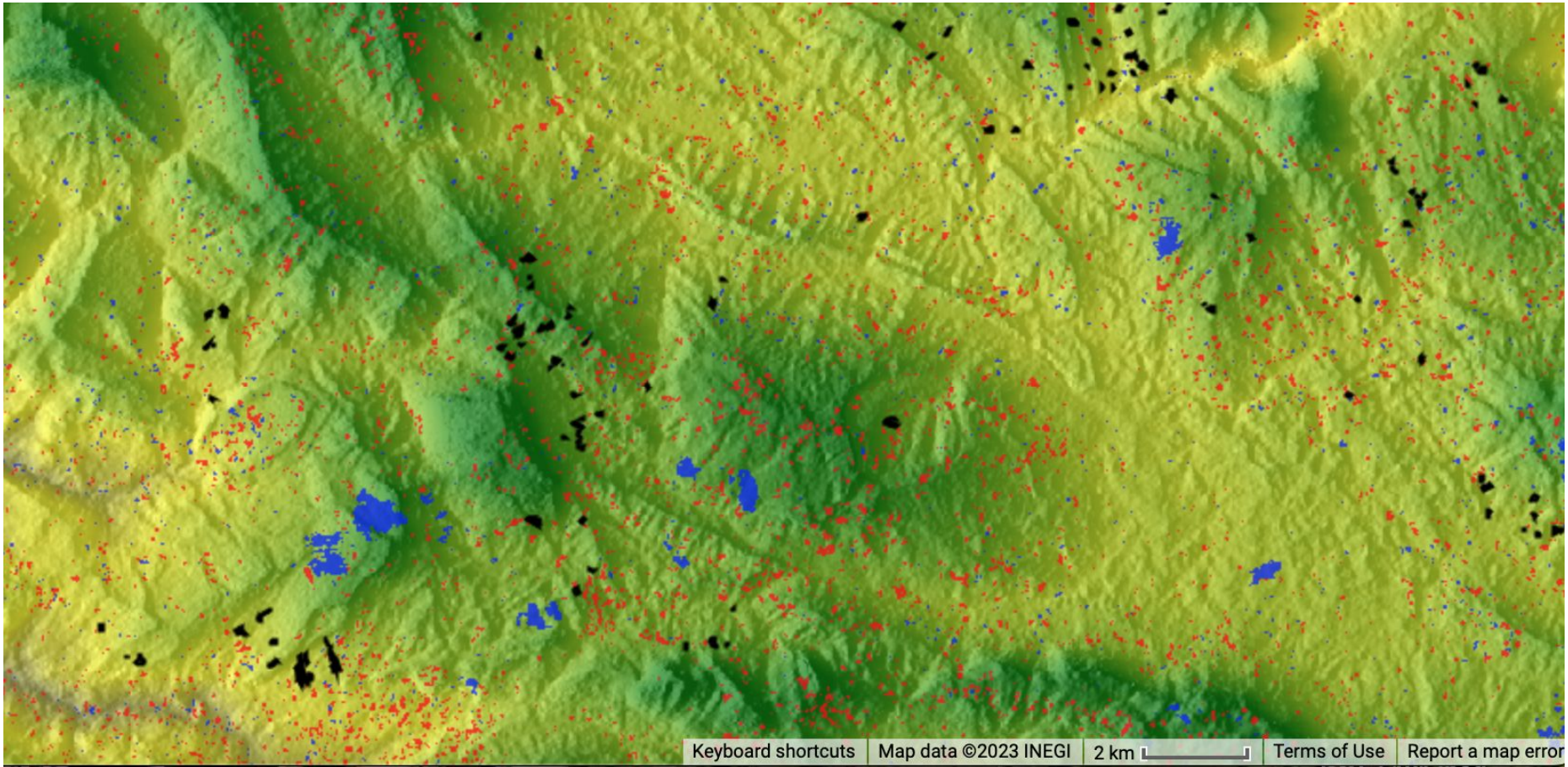
Setting and Data

- Dataset is of Chiapas, Mexico coffee farms
- 352 Parcels of coffee farms in the region
- NDVI data: Landsat 8 images from 2013-2018
- Elevation data: SRTM V3 30m
-

Study Map


0
2
4
8
Miles
parcelas
Tseltal Coffee Farm Parcels
CONANP, Esri, HERE, Garmin, Foursquare, METI/NASA, USGS, Esri, NASA, NGA, USGS, bus,USGS,NGA,NASA,CGIAR,NCEAS,NLS,OS,NMA,Geodatastyrelsen,GSA,GSI and the GIS User Community

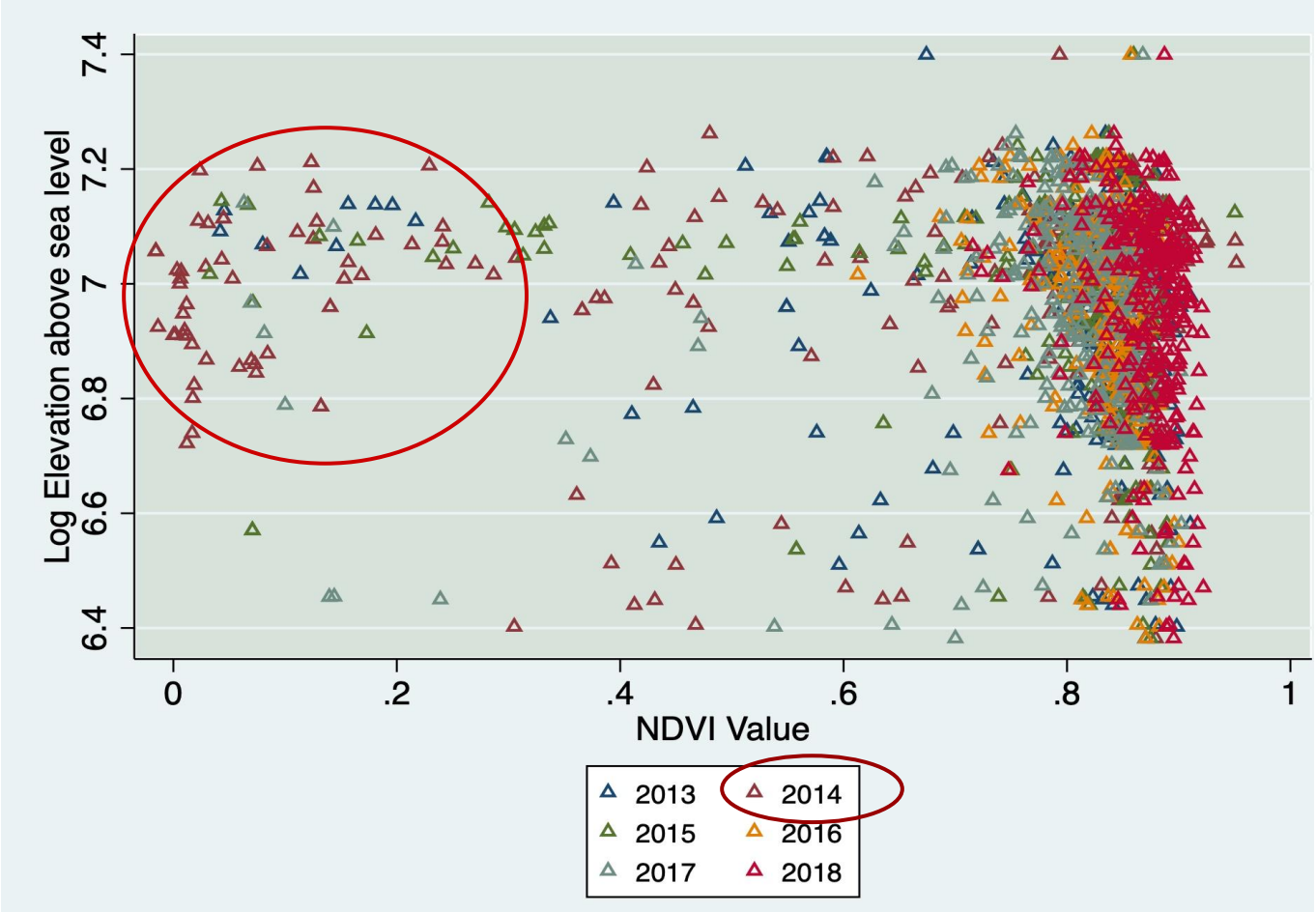
Study Map


Keyboard shortcuts
Map data ©2023 INEGI
2 km
Terms of Use
Report a map error

Mean Values by Year

	mean	sd
NDVI 2013 mean	.7981071	.1390736
NDVI 2014 mean	.6861645	.2931724
NDVI 2015 mean	.7904902	.1655538
NDVI 2016 mean	.8303274	.0385375
NDVI 2017 mean	.7977389	.1256157
NDVI 2018 mean	.8714618	.0328375
N	352	

Economic Interpretation



Regression

Table 1. NDVI Change from 2013 to 2014

VARIABLES	NDVI Change
Log Elevation	0.0607
	(0.0975)
Constant	-0.534
	(0.679)
Observations	351
R-squared	0.001

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1