



Climate Exercise – Day 2

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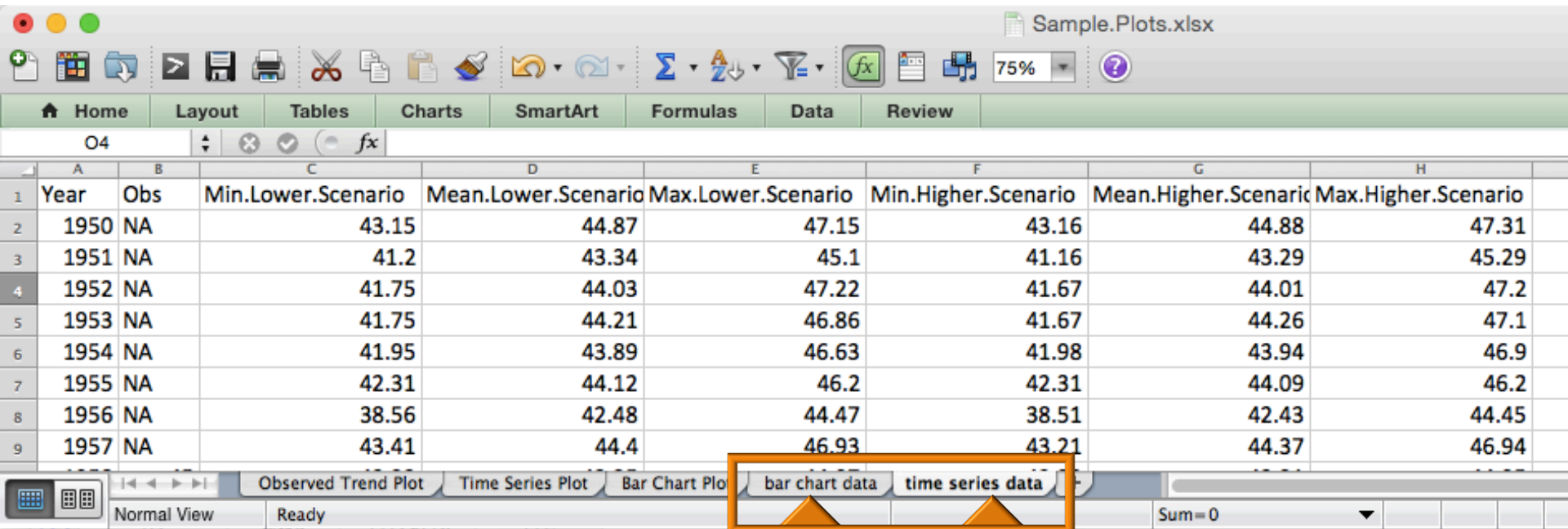
YESTERDAY ...

- STEP ONE: Opened the statistical programming package R on your computer. Follow the instructions so the program knows where to find the directories it will need.
- STEPS TWO and THREE: Calculated climate indicators using two types of data: (1) weather station data for one of 64 different stations around India, and (2) gridded data covering all of India.

TODAY ...

- STEPS FOUR and FIVE: Plot the weather station projections using Excel, and plot the gridded data using a program called Panoply.

SAMPLE.PLOTS -> 3 TYPES OF EXCEL PLOTS



SAMPLE.PLOTS -> 3 TYPES OF EXCEL PLOTS

Sample.Plots.xlsx

75%

Home Layout Tables Charts SmartArt Formulas Data Review

O4

	A	B	C	D	E	F	G	H
1	Year	Obs	Min.Lower.Scenario	Mean.Lower.Scenario	Max.Lower.Scenario	Min.Higher.Scenario	Mean.Higher.Scenario	Max.Higher.Scenario
2	1950	NA	43.15	44.87	47.15	43.16	44.88	47.31
3	1951	NA	41.2	43.34	45.1	41.16	43.29	45.29
4	1952	NA	41.75	44.03	47.22	41.67	44.01	47.2
5	1953	NA	41.75	44.21	46.86	41.67	44.26	47.1
6	1954	NA	41.95	43.89	46.63	41.98	43.94	46.9
7	1955	NA	42.31	44.12	46.2	42.31	44.09	46.2
8	1956	NA	38.56	42.48	44.47	38.51	42.43	44.45
9	1957	NA	43.41	44.4	46.93	43.21	44.37	46.94

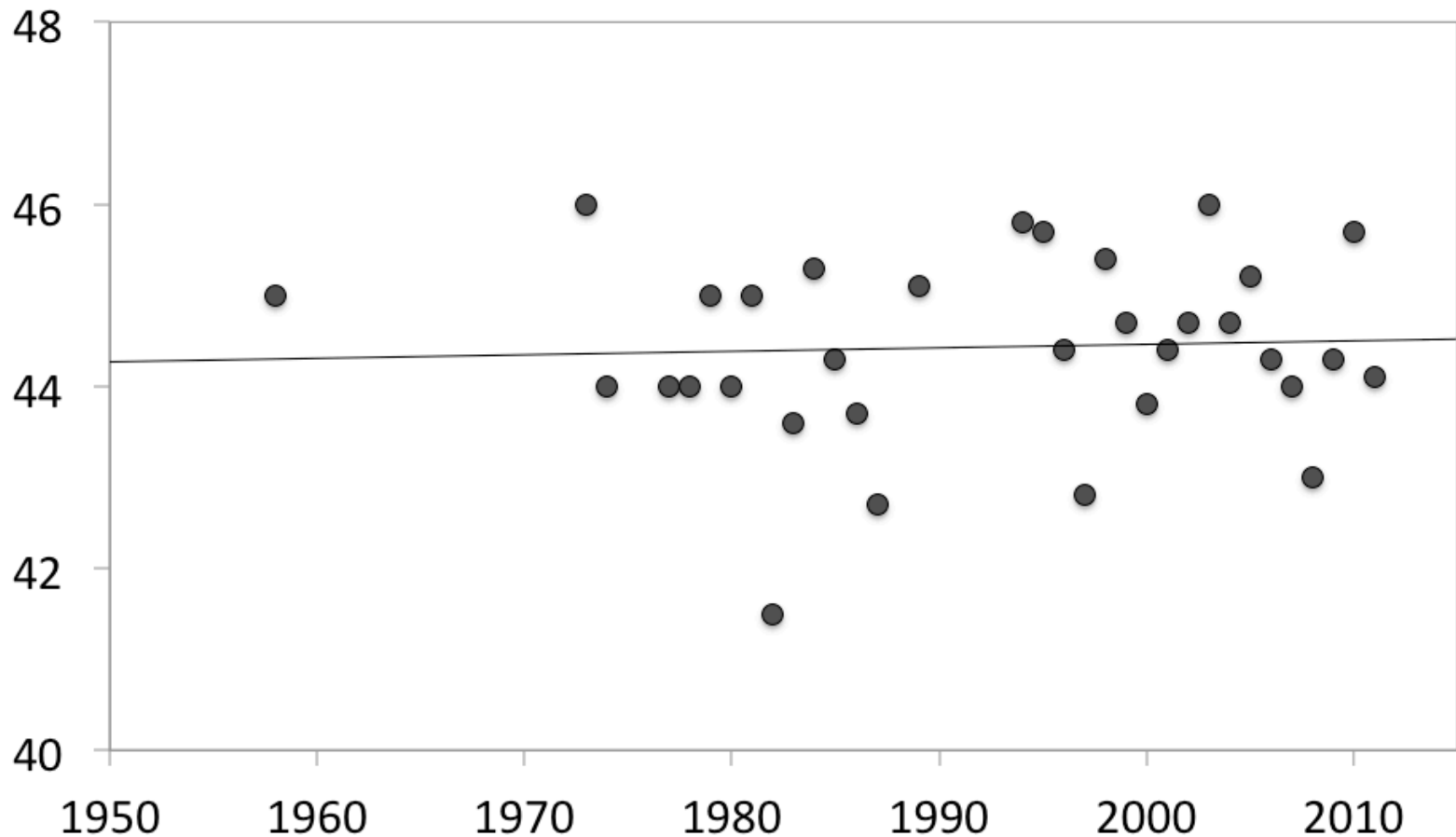
Observed Trend Plot Time Series Plot Bar Chart Plot

Normal View Ready Sum = 0



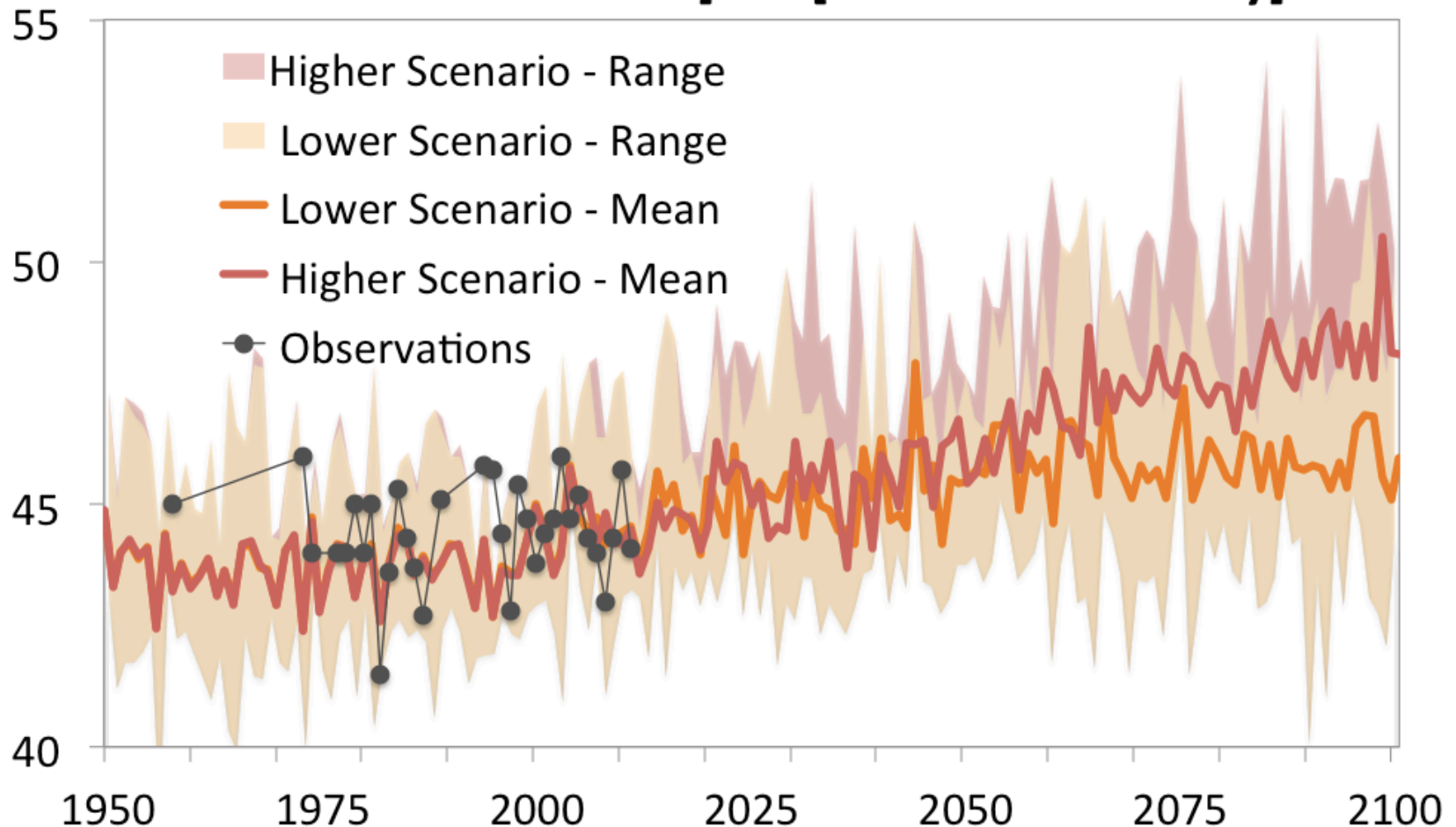
SAMPLE.PLOTS -> 3 TYPES OF EXCEL PLOTS

Observed trend in average temperature on the hottest 3 days of the year at Jabalpur



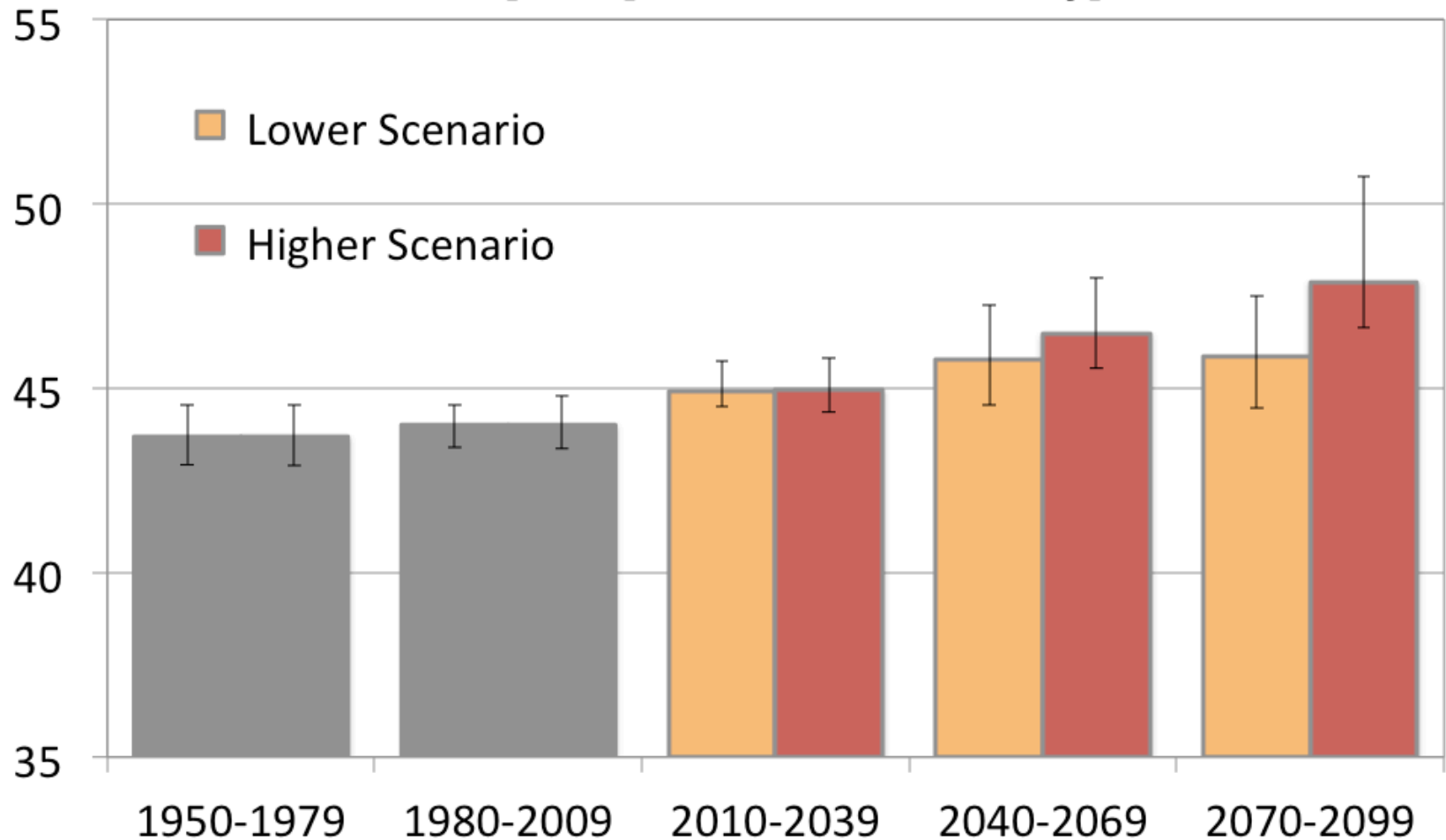
SAMPLE.PLOTS -> 3 TYPES OF EXCEL PLOTS

Observed and Projected Future Change in [insert name of variable here] for [insert name of city]



SAMPLE.PLOTS -> 3 TYPES OF EXCEL PLOTS

Projected changes in [insert name of variable here] for [insert name of city]



PANOPLY -> MAPS

Create Plot

Combine Plot

Open Dataset

Datasets

Catalogs

Bookmarks

Name	Long Name	Type
▼ india.map.pr.average.from.ma...	india.map.pr.average.from.may.to.aug...	Local File
lat	lat	1D
lon	lon	1D
rcp45.pr.average.from.may...	rcp45.pr.average.from.may.to.aug	Geo2D
rcp85.pr.average.from.may...	rcp85.pr.average.from.may.to.aug	Geo2D
time	time	1D

Remove

Remove All

Hide Info

File "india.map.pr.average.from.may.to.aug.nc"

File type: NetCDF-3/CDM

netcdf file:/Users/khayhoe/Desktop/testing.india/india.map
dimensions:
 lon = 200;
 lat = 160;
 time = UNLIMITED; // (5 currently)
variables:
 double lon(lon=200);
 :units = "degrees_east";
 :long_name = "lon";

 double lat(lat=160);
 :units = "degrees_north";
 :long_name = "lat";

 int time(time=5);
 :units = "beginning_of_30y_climatological_period";
 :long_name = "time";

 float rcp45.pr.average.from.may.to.aug(time=5, lat=160
 :units = "mm";
 :_FillValue = 1.0E30f; // float

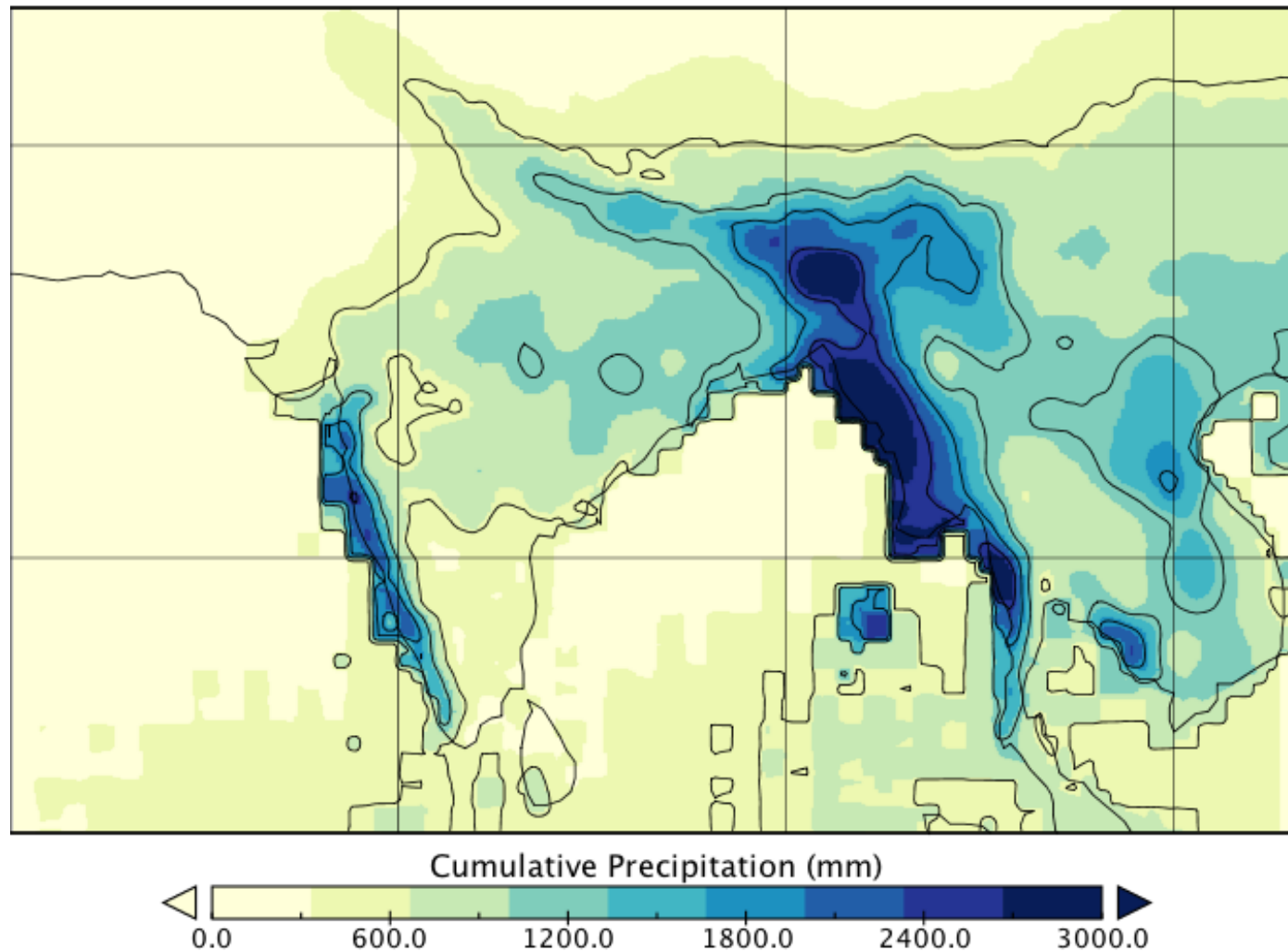
 float rcp85.pr.average.from.may.to.aug(time=5, lat=160
 :units = "mm";
 :_FillValue = 1.0E30f; // float

}

Show: All variables

PANOPLY -> MAPS

Monsoon Season Precipitation (May–Aug) for 2070–2099



TODAY ...

- STEPS FOUR and FIVE: Plot the weather station projections using Excel, and plot the gridded data using a program called Panoply.
- STEP SEVEN: Calculate one or two more variables that are relevant to your city or region.

We care about
a changing climate

**BECAUSE IT EXACERBATES
MANY OF THE RISKS WE
ALREADY FACE TODAY**

We're vulnerable to drought



... and water shortages



... and flooding



TODAY ...

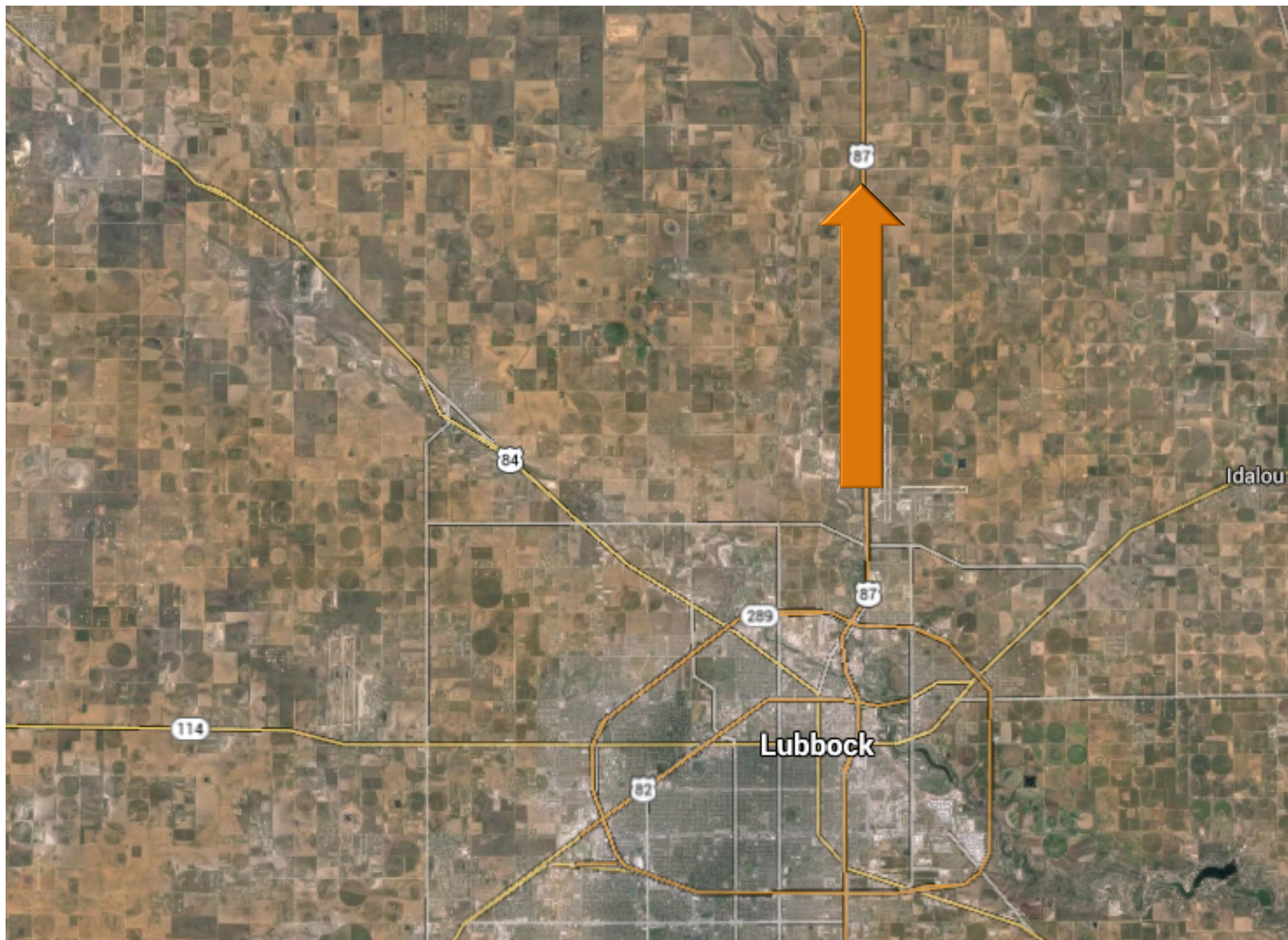
- STEPS FOUR and FIVE: Plot the weather station projections using Excel, and plot the gridded data using a program called Panoply.
- STEP SEVEN: Calculate one or two more variables that are relevant to your city or region.
- STEP EIGHT: Turn your plots into a Powerpoint presentation!

INSERT A PHOTO OR A PICTURE OF YOUR CITY OR REGION HERE

Climate Projections for [insert your city or region]

[YOUR NAME]

[Your Organization or Institution]





**Plan for the curve in the road
to ensure a safe future
for all of us.**