

# rmap Cheat Sheet

Webpage: <https://jgcri.github.io/rmap/>  
Github: <https://github.com/JGCRI/rmap>

## Structure

### KEY INPUTS

myFile.csv file

OR

R Data Frame

subRegion	value
TX	32
AZ	54

```
data = data.frame(  
  subRegion = c("TX", "AZ"),  
  value = c(32,54))
```

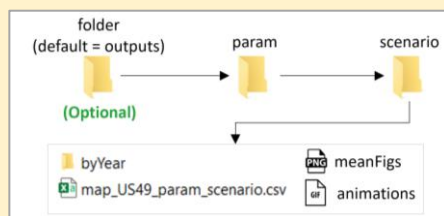
**Optional Columns:** param, scenario, year, class, units

### CODE

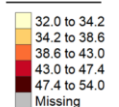
```
library(rmap);  
map(data) # OR  
map("path/To/myFile.csv")
```

### KEY OUTPUTS

- Maps saved in the working directory as follows:



#### FreeScale



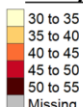
Each map  
own scale

#### Kmeans



Same scale across  
years and classes

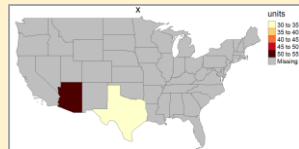
#### Pretty



## Pre-loaded Maps (Automatically find maps for data if available)

### US49

```
data = data.frame(subRegion = c("TX", "AZ"),  
  value = c(32, 54), year=c(2010,2010))  
map(data)
```



### Countries and cropToBoundary

```
data = data.frame(subRegion = c("India", "China"), value = c(32,54))  
map(data, cropToBoundary=T)
```



### GCAM Basins

```
data = data.frame( subRegion = c("La_Plata", "Amazon"),  
  value = c(32,54))  
map(data, cropToBoundary=T)
```

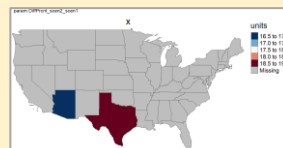


## Multiple Scenarios, Years and Classes

### Multi-scenario Diff plots

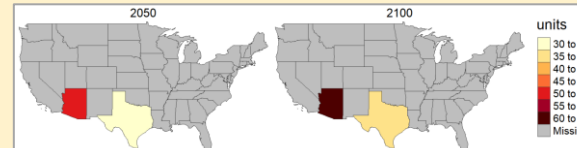
```
data = data.frame(subRegion = c("TX", "TX", "AZ", "AZ"),  
  scenario = c("scen1", "scen2", "scen1", "scen2"),  
  value = c(32, 38, 54, 63))  
map(data, scenRef="scen1")
```

DiffAbs\_scen2\_scen1  
DiffPrnt\_scen2\_scen1  
scen1  
scen2



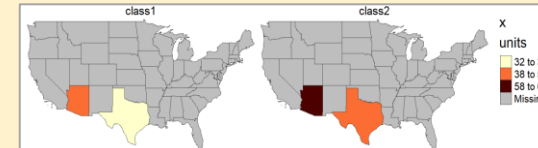
### Multi-Year Animation/Mean

```
data = data.frame(subRegion = c("TX", "TX", "AZ", "AZ"),  
  year = c("2050", "2100", "2050", "2100"), value = c(32, 38, 54, 63))  
map(data, folderName="multiyear")
```



### Multi-Class

```
data = data.frame(subRegion = c("TX", "TX", "AZ", "AZ"),  
  class = c("class1", "class2", "class1", "class2"),  
  value = c(32, 38, 54, 63))  
map(data)
```



## Customize Scales, Colors, Background

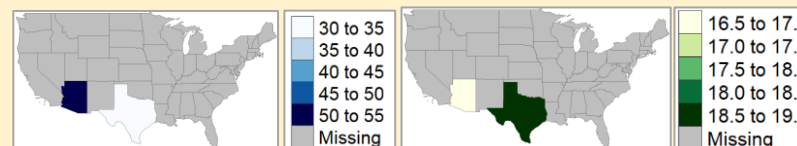
### Set scale ranges

```
data = data.frame(subRegion = c("TX", "TX", "AZ", "AZ"),  
  scenario = c("scen1", "scen2", "scen1", "scen2"),  
  value = c(32, 38, 54, 63))  
map(data,  
  scaleRange = c(30,50), scaleRangeDiffPrnt = c(10,30))
```



### Change Palettes

```
data = data.frame(subRegion = c("TX", "TX", "AZ", "AZ"),  
  scenario = c("scen1", "scen2", "scen1", "scen2"),  
  value = c(32, 38, 54, 63))  
map(data, scenRef= "scen1",  
  classPalette = "pal_wet", classPaletteDiff = "pal_green")
```



### Extended Boundary

```
data = data.frame(  
  subRegion = c("India", "China"), value = c(32,54))  
map(data,  
  background = T)
```

