sp package

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The package sp

- classes and methods for spatial data

```
library(sp)
```

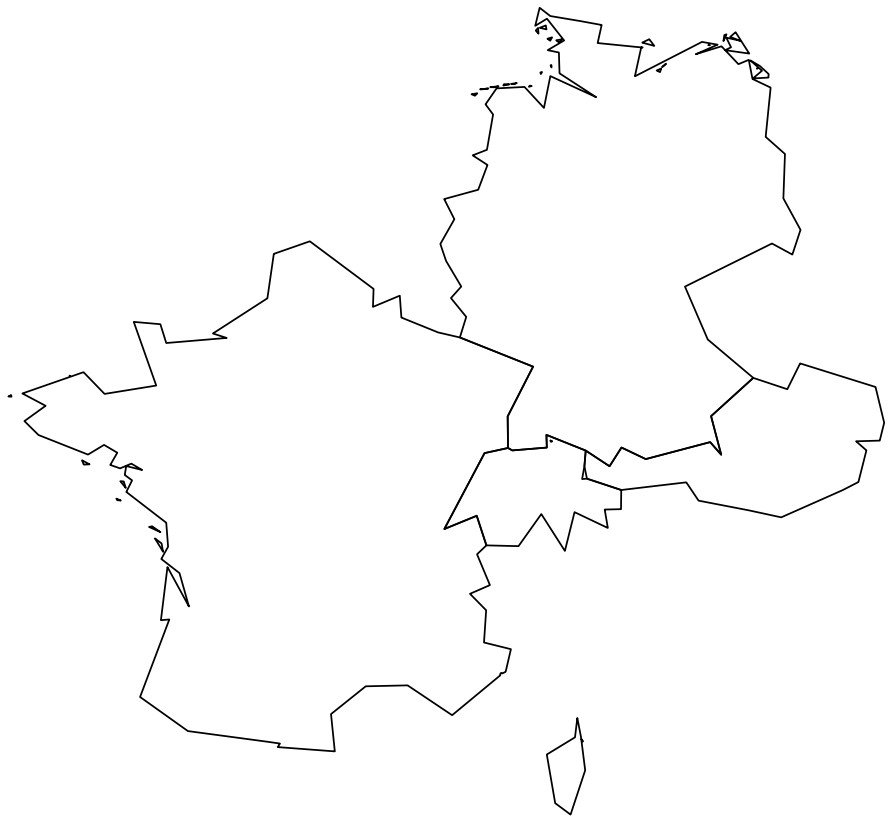
Hello world

- A first example using data from maptools (ISO2-codes)

```
library(maptools)
data("wrld_simpl")
ISO2codes <- wrld_simpl@data$ISO2
countries <- c("FR","DE","AT","CH")
ind <- match(countries,ISO2codes)
my_map <- wrld_simpl[ind,]
```

Plot my map

```
plot(my_map)
```



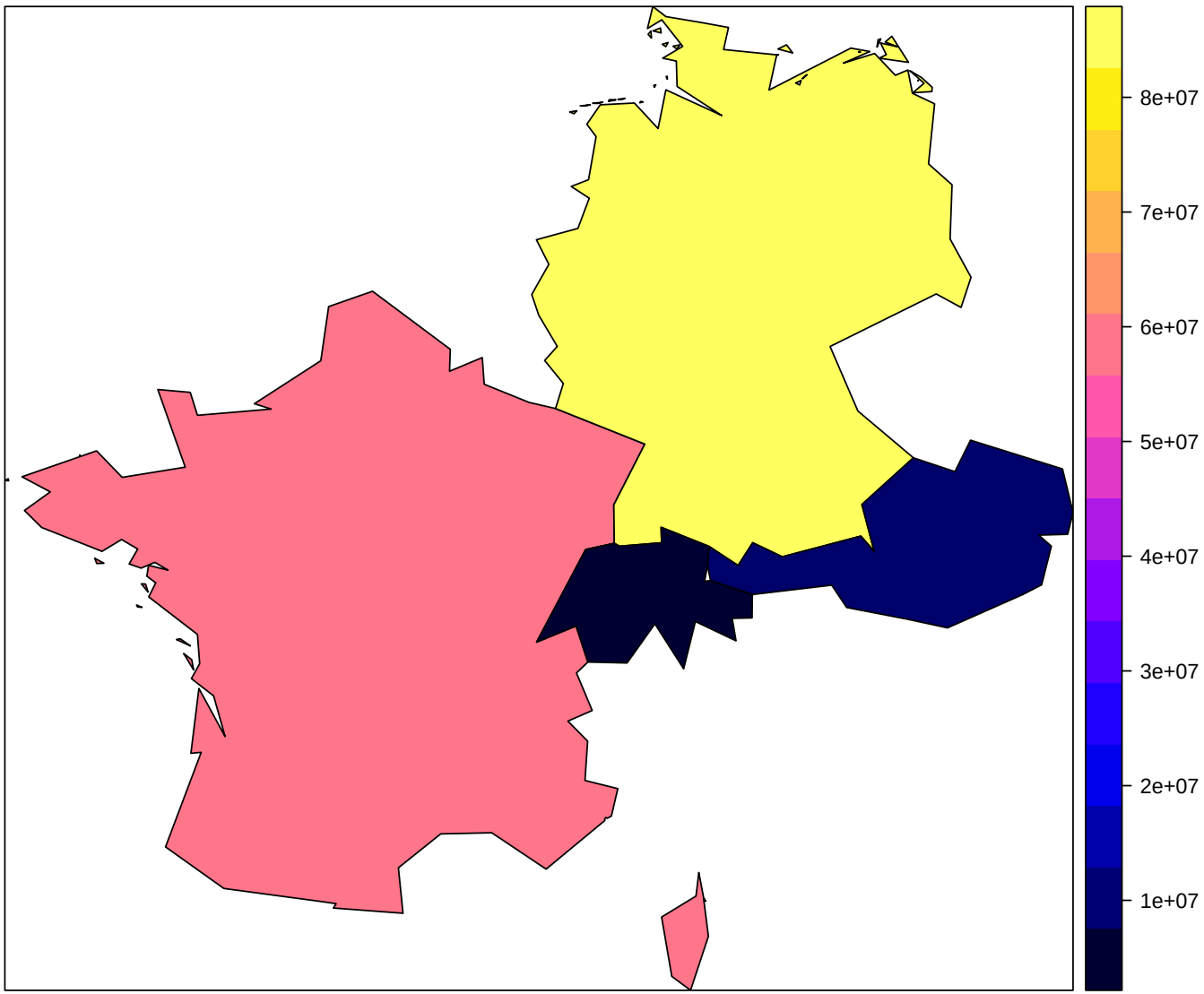
The data set

```
head(my_map@data)
```

	FIPS	ISO2	ISO3	UN	NAME
FRA	FR	FR	FRA	250	France
DEU	GM	DE	DEU	276	Germany
AUT	AU	AT	AUT	40	Austria
CHE	SZ	CH	CHE	756	Switzerland

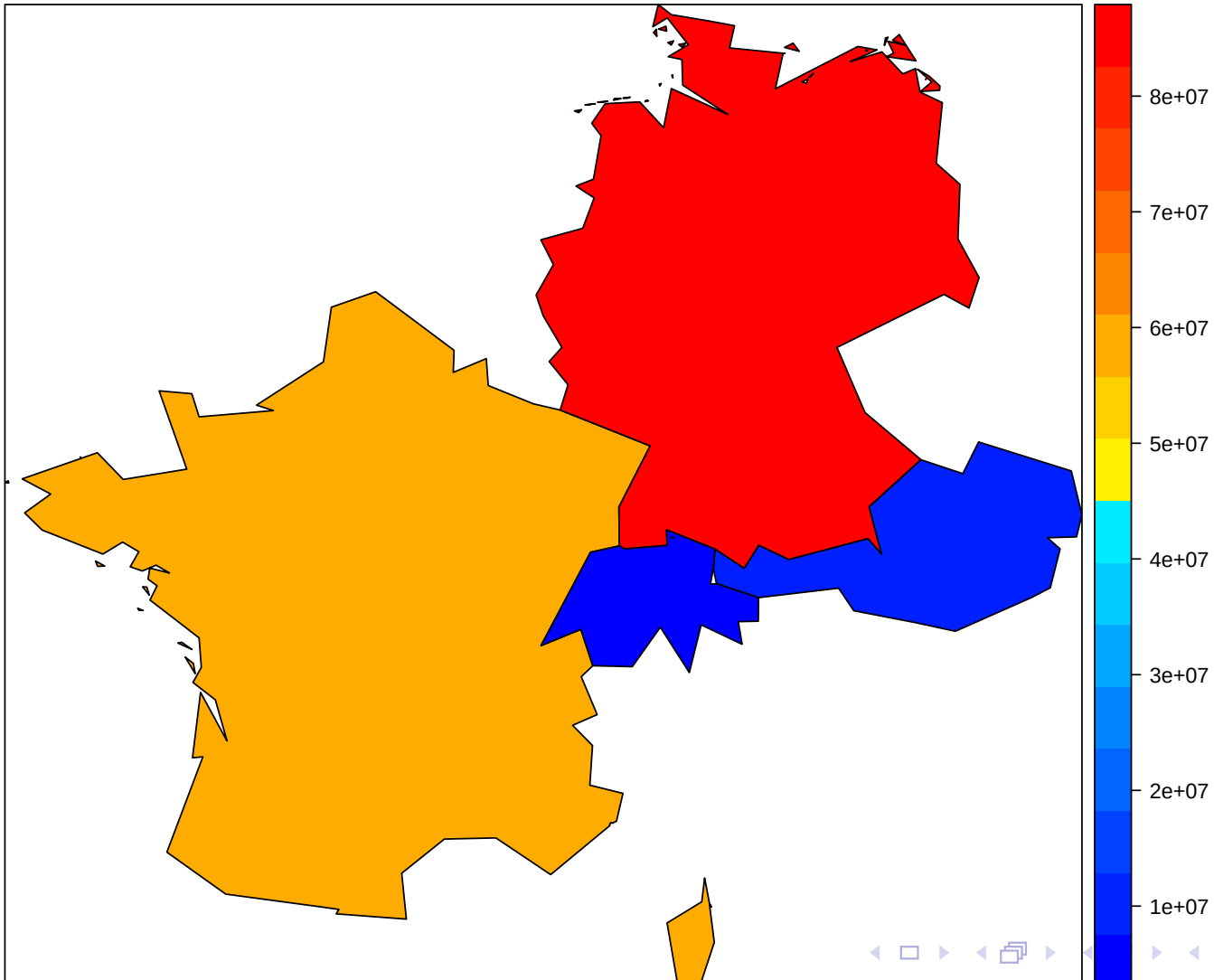
First example

```
spplot(my_map,"POP2005")
```



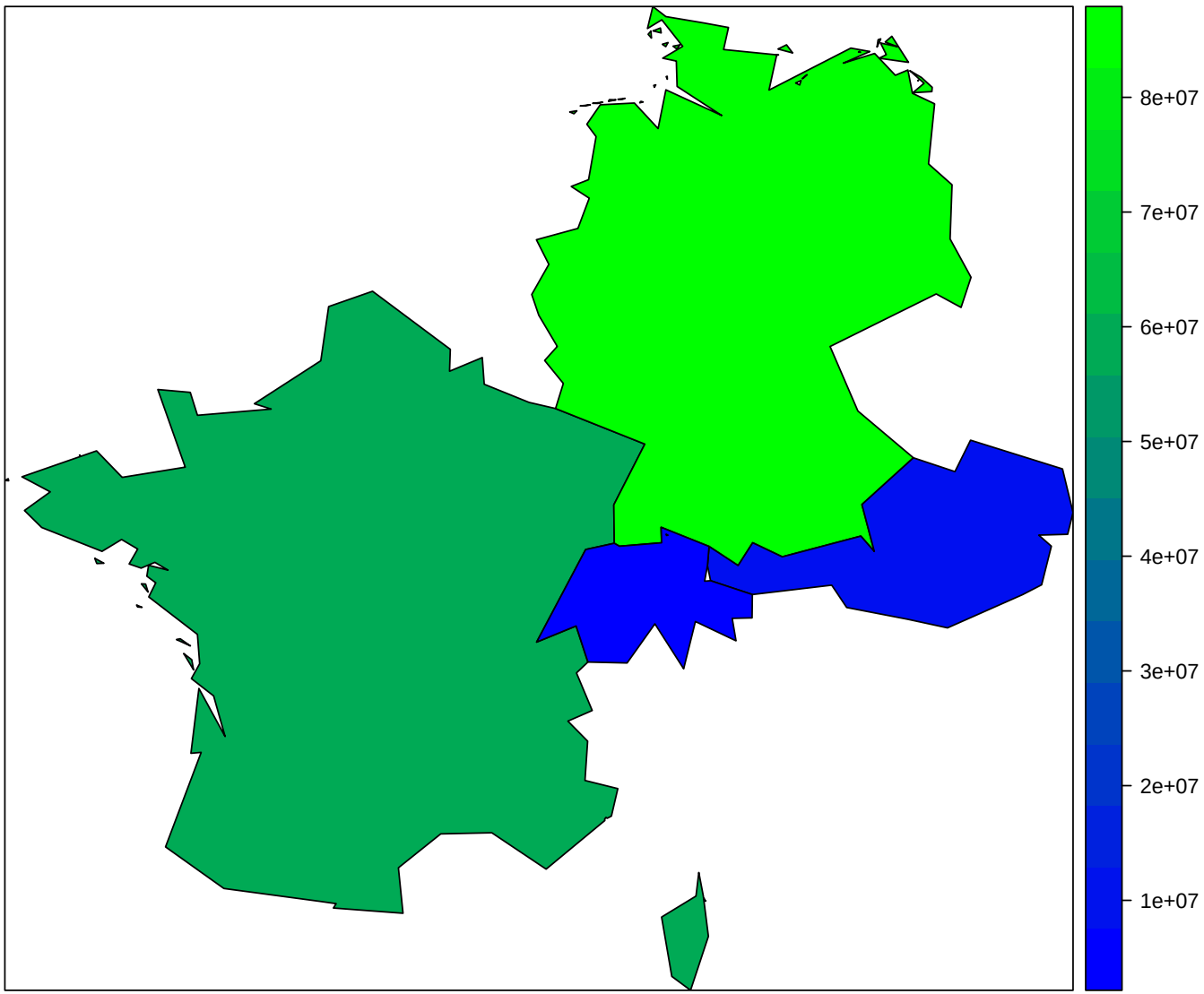
Using colorRamps

```
library(colorRamps)
spplot(my_map,"POP2005",col.regions=blue2red(100))
```



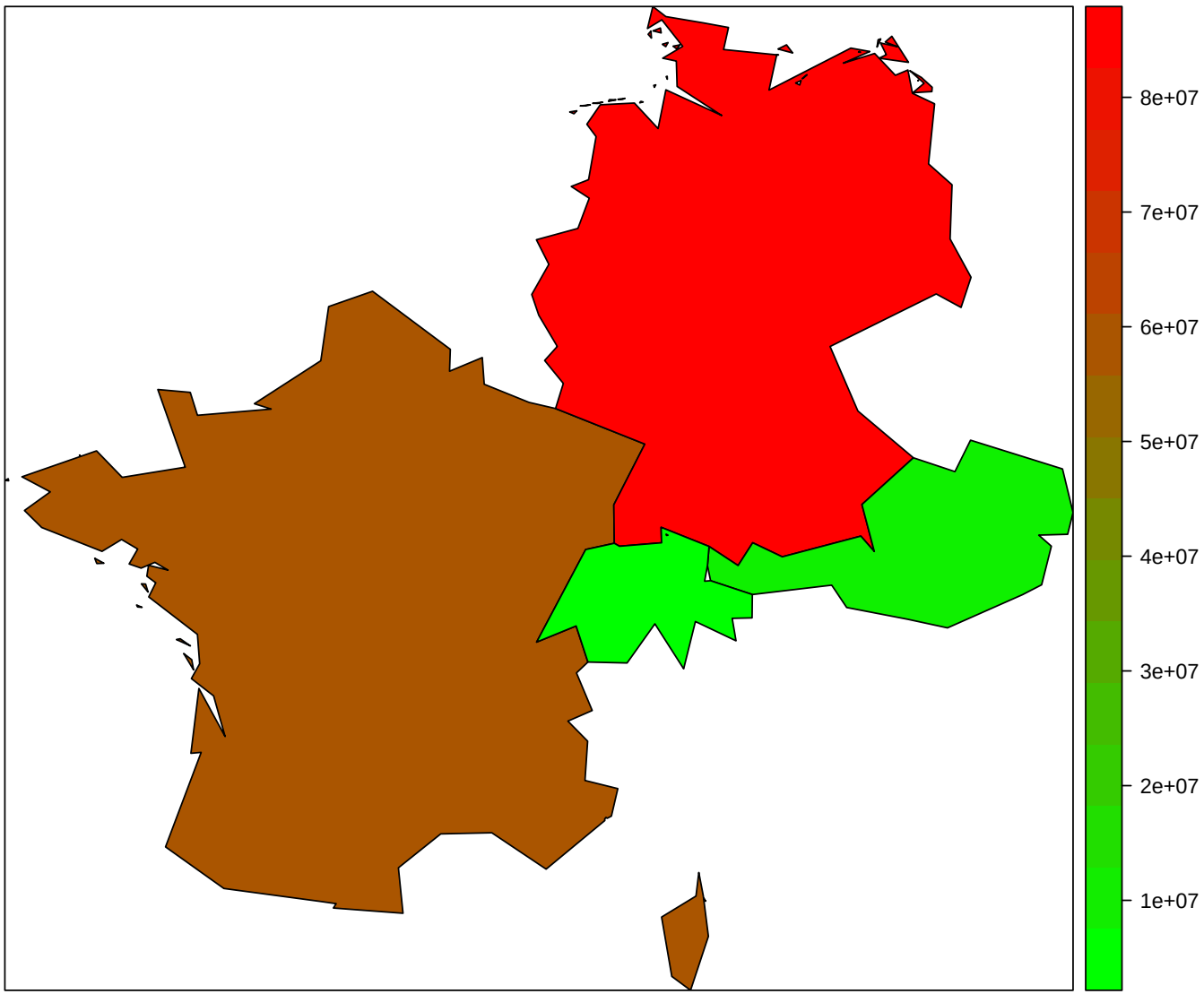
Using colorRamps

```
spplot(my_map,"POP2005",col.regions=blue2green(100))
```



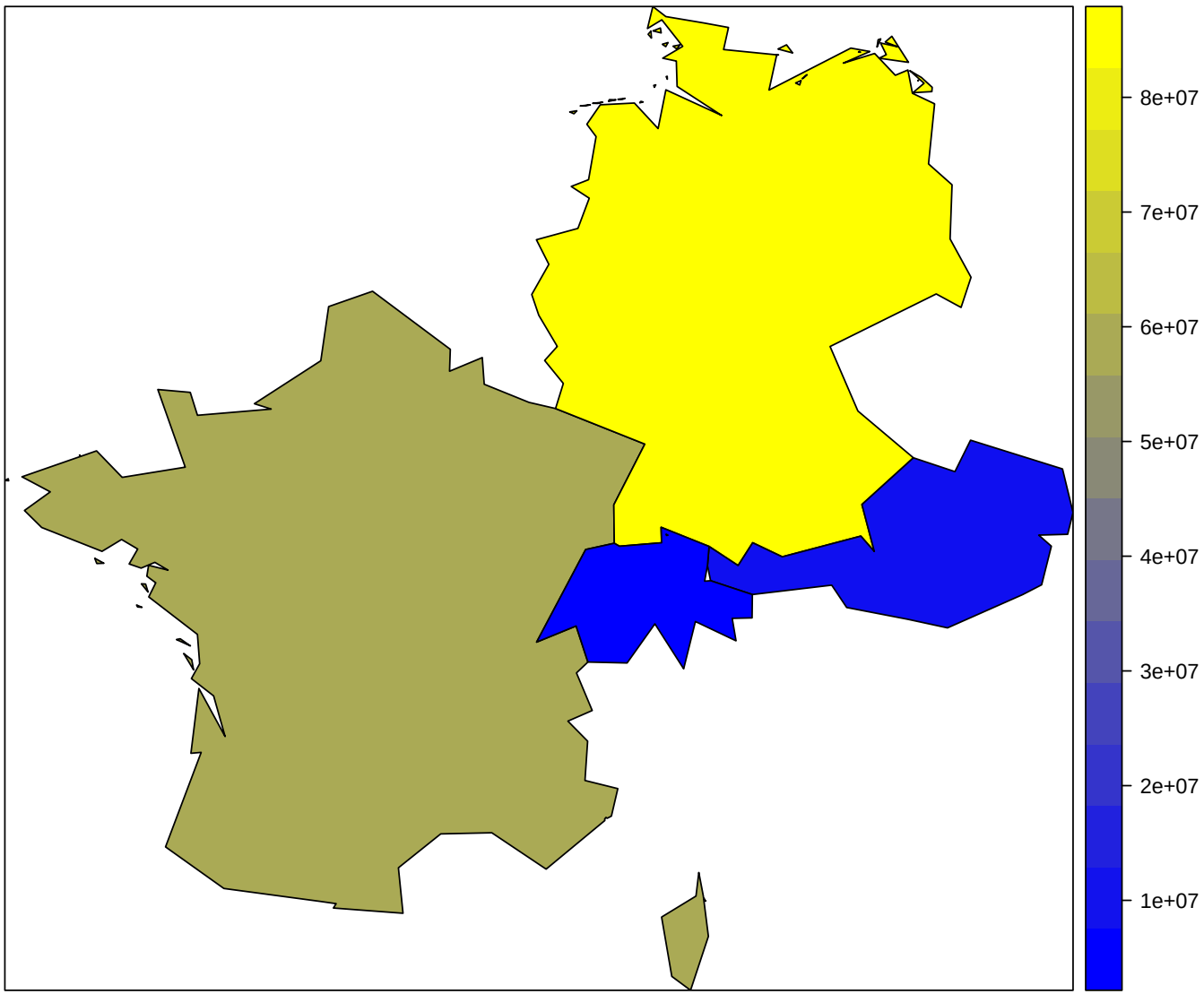
Using colorRamps

```
spplot(my_map,"POP2005",col.regions=green2red(100))
```



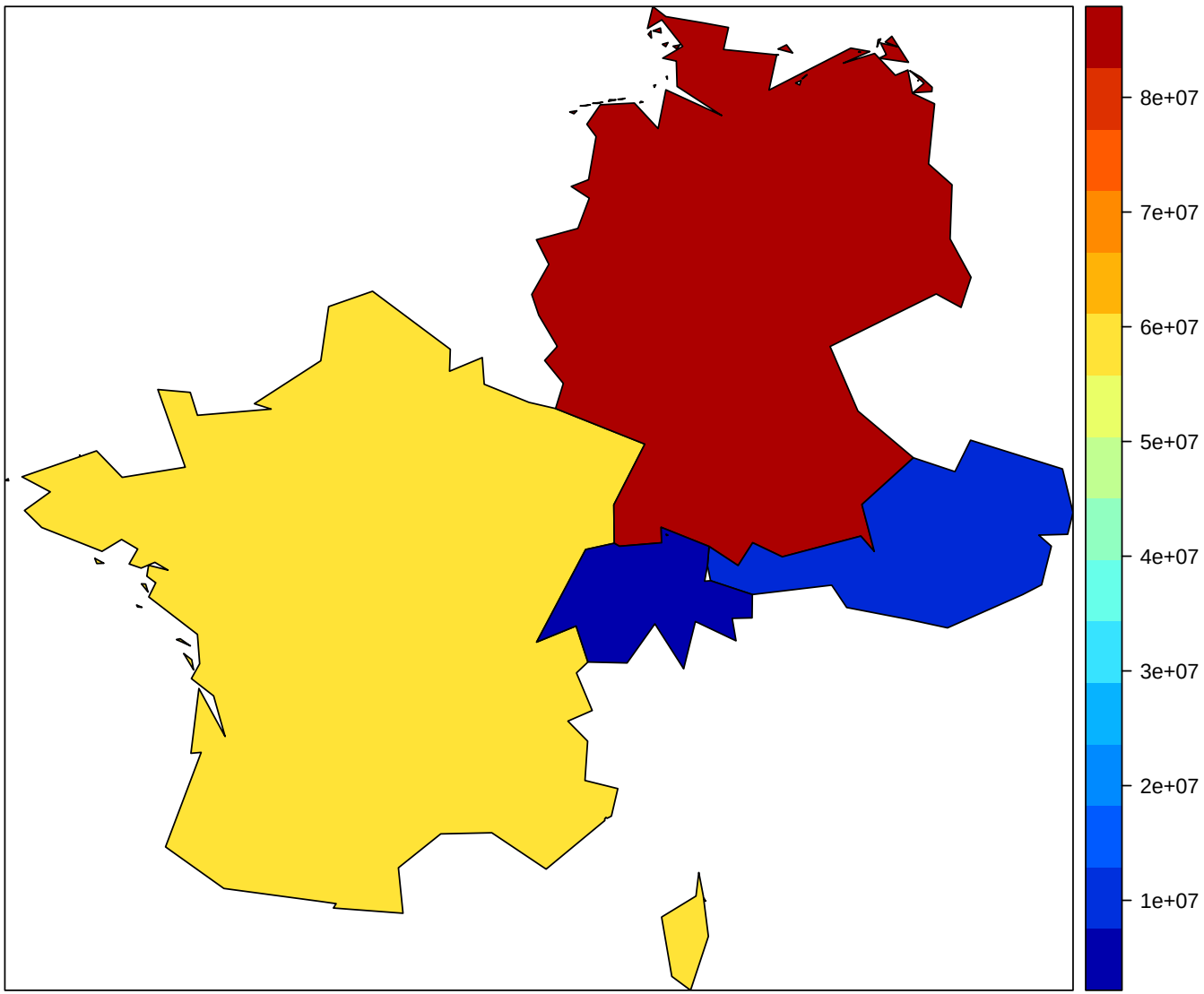
Using colorRamps

```
spplot(my_map,"POP2005",col.regions=blue2yellow(100))
```



Using colorRamps

```
spplot(my_map,"POP2005",col.regions=matlab.like(100))
```



Using synthetic data

Generating synthetic data (Population 2010)

```
my_map$Pop2010 <- my_map$POP2005 +
runif(length(my_map),-10000,10000)
```

Colors matlab like

```
spplot(my_map,c("POP2005","Pop2010"),
       col.regions=matlab.like(100))
```