

GADMTools

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epiconcept

smart tools



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GADMTools

un package 'spatial' de plus?

D'abord, un besoin personnel...

... ensuite, un besoin professionnel...

... puis enfin, le plaisir de partager.



GADMTools

répondre à une problématique

- 1... je ne connais rien ou presque en cartographie
- 2... je ne maîtrise pas suffisamment R
- 3... je veux juste représenter des données...
- 4... du canton de Corte en Corse!



GADMTools

objectifs

En R

Simple à utiliser

Opensource



GADMTools

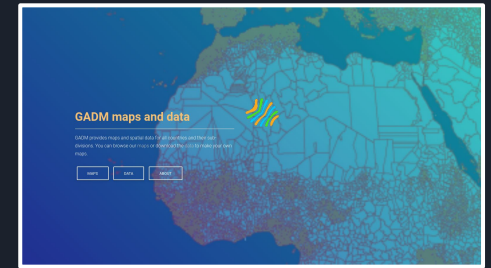
une petite question...

Où trouver des shapefiles des divisions administratives d'un maximum de pays?



GADMTools

utilise gadm.org



<https://gadm.org>



GADMTools

le canton de Corte en - de 1mn

C'est possible :

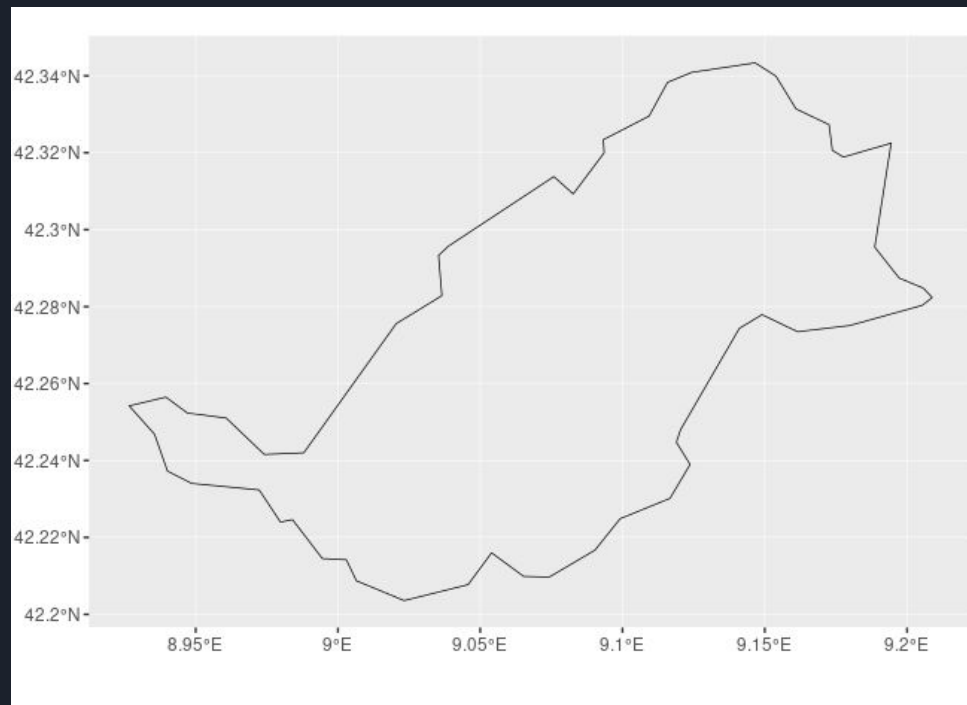
```
library(GADMTools)
```

```
FRA <- gadm_sf_loadCountries("FRA", 4, "./")
```

```
Corte <- gadm_subset(FRA, 4, regions="Corte")
```

```
gadm_plot(Corte)
```

le canton de Corte en - de 1mn



The logo for GADMTools, featuring a blue and green geometric shape on the left.

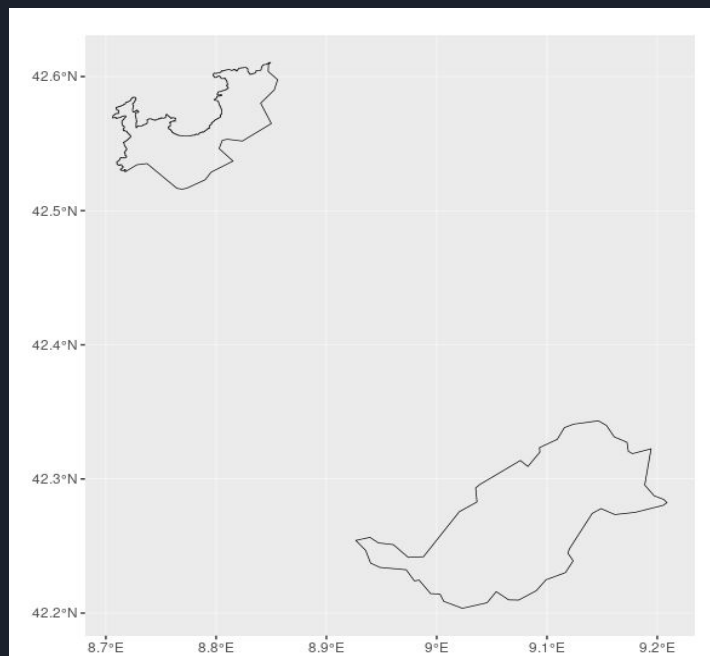
GADMTools

Calvi ET Corte sur la même map!

```
CC <- gadm_subset(FRA, 4, c("Corte", "Calvi"))
```

```
gadm_plot(CC)
```

les cantons de Calvi et Corte



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GADMTools

Assembler des pays

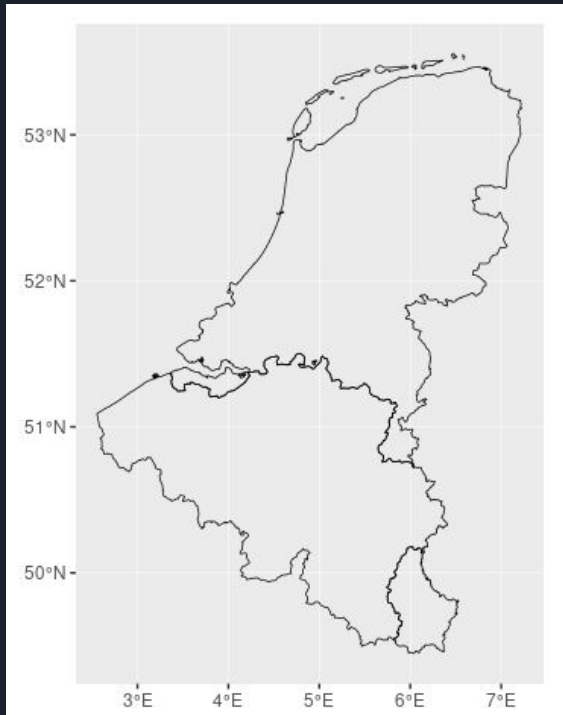
```
BNLX <- gadm_sf_loadCountries(  
  c("BEL", "LUX", "NLD"), 0, "./")
```

```
gadm_plot(BNLX)
```



GADMTools

le Benelux



BE NE LUX



GADMTools

La Corse seule

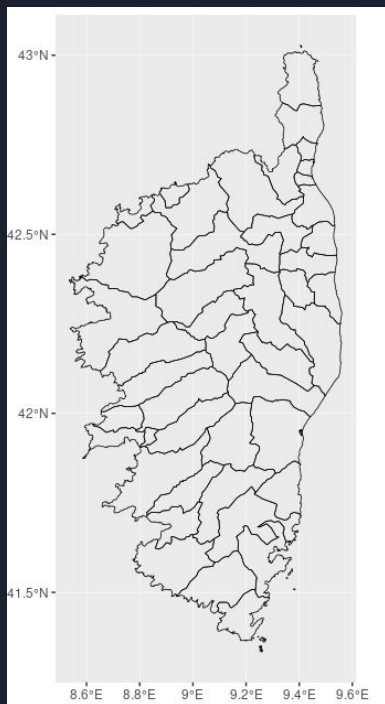
```
Corse <-gadm_subset(FRA, 1, "Corse")
```

```
gadm_plot(Corse)
```



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la Corse @ level 4



CANTONS
CORSES

The logo for GADMTools, featuring a blue and green geometric shape on the left side.

GADMTools

les départements de la Corse

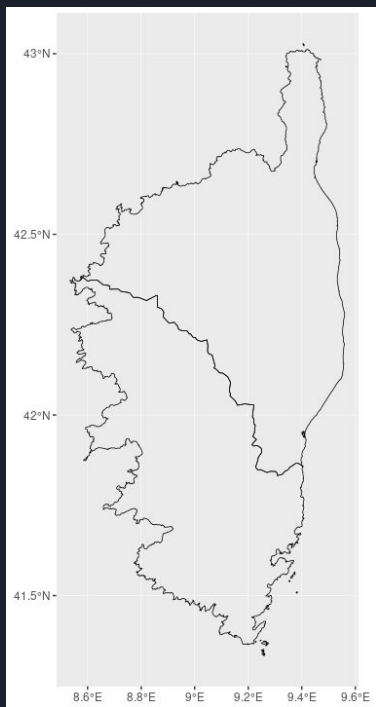
```
Deps <- gadm_union(Corse, level=2)
```

```
gadm_plot(Deps)
```



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la Corse @ level 2!



DÉPARTEMENTS
CORSES



GADMTools

ajouter un fond

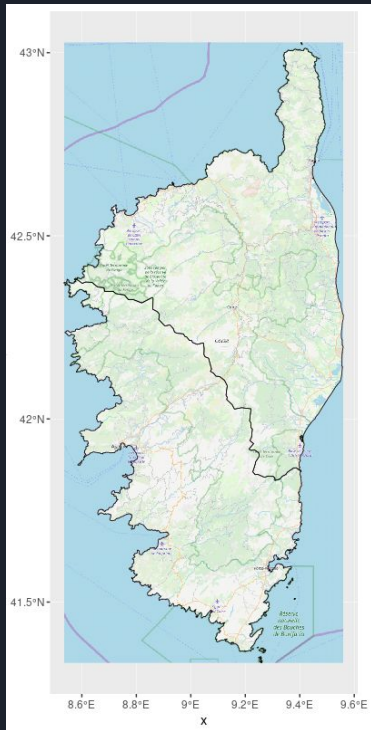
```
Deps <- gadm_getBackground(  
  Deps,  
  name = "BG_Corse",  
  clip=FALSE)
```

```
gadm_plot(Deps)
```



GADMTools

...merci OpenStreetMap!



PACKAGES
rosm & raster

The logo for GADMTools, featuring a blue and green geometric shape on the left.

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clipping du fond

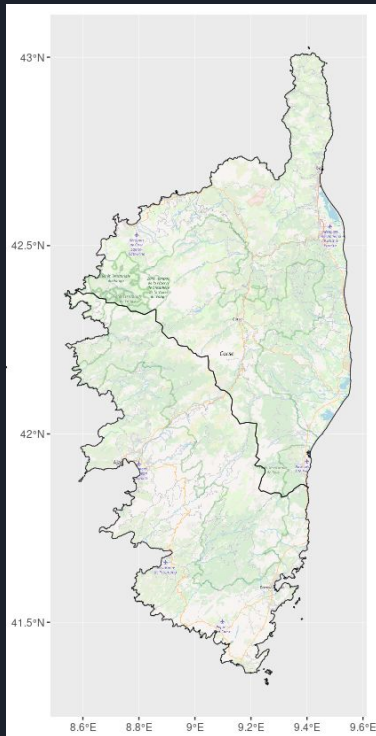
```
Deps <- gadm_getBackground(  
  Deps,  
  name = "BG_Corse")
```

```
gadm_plot(Deps)
```



GADMTools

...merci encore OpenStreetMap!



La CORSE
en 1 clip...

The logo for GADMTools, featuring a blue and green geometric shape on the left.

GADMTools

cropping...

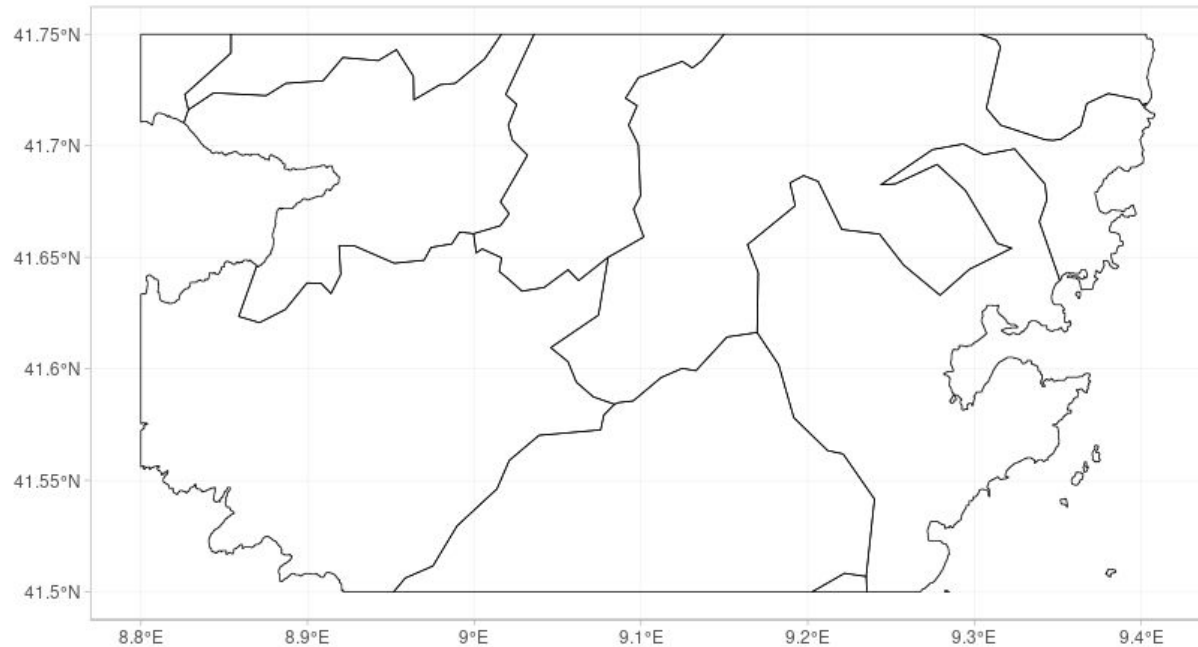
```
Crop <- gadm_crop(Corsica,  
                  xmin=8.8, ymin=41.5,  
                  xmax=9.5, ymax=41.75)
```

```
gadm_plot(Crop)
```



GADMTools

cropping





GADMTools

...Ok... mais on en fait quoi après?

DES STATS

GADMTools

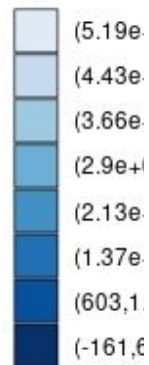
des choropleths...

Répartition des spécialistes en France

Data from RPPS



Specialistes



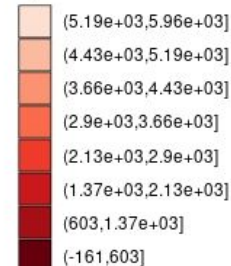
Background map from OpenStreetMap

Répartition des spécialistes en France

Data from RPPS



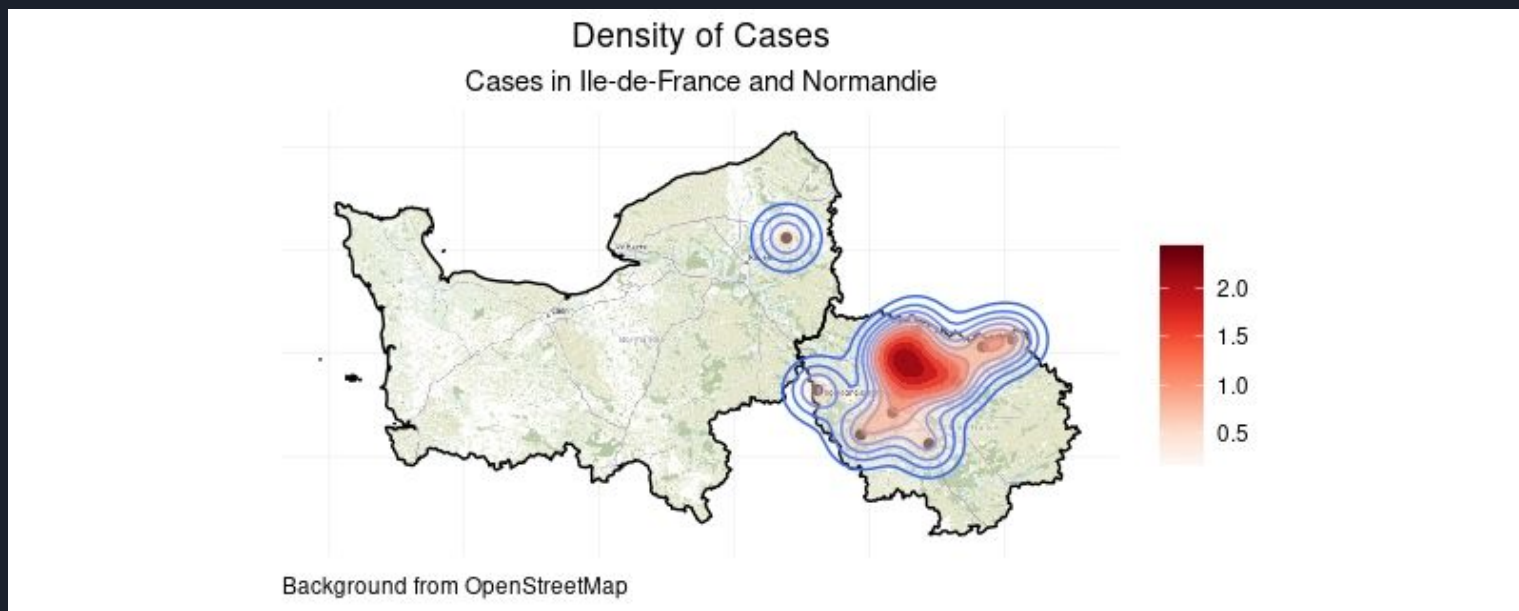
Specialistes

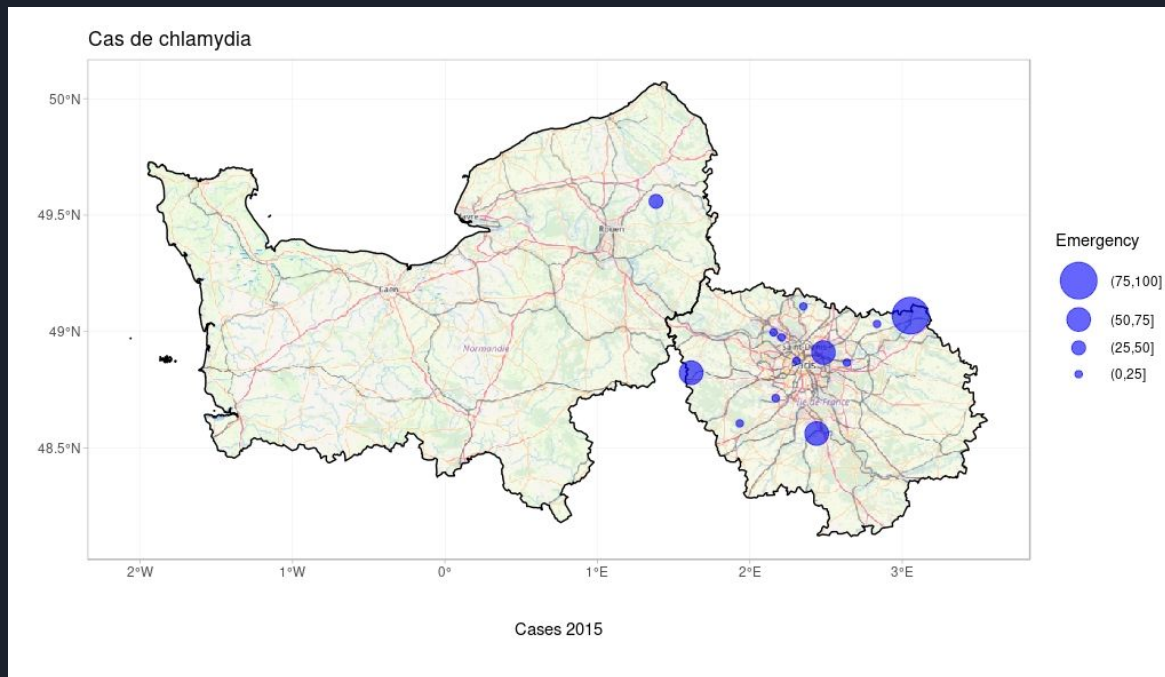


Background map from OpenStreetMap

GADMTools

des isopleths...





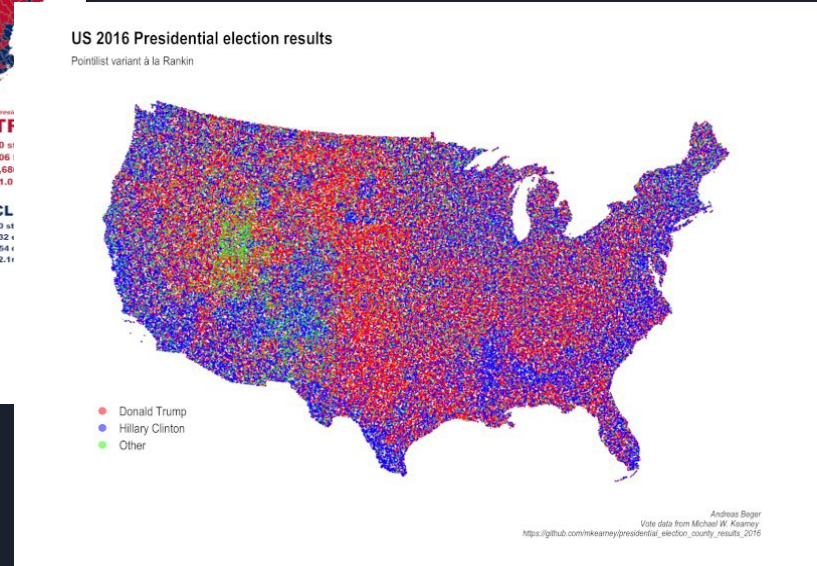
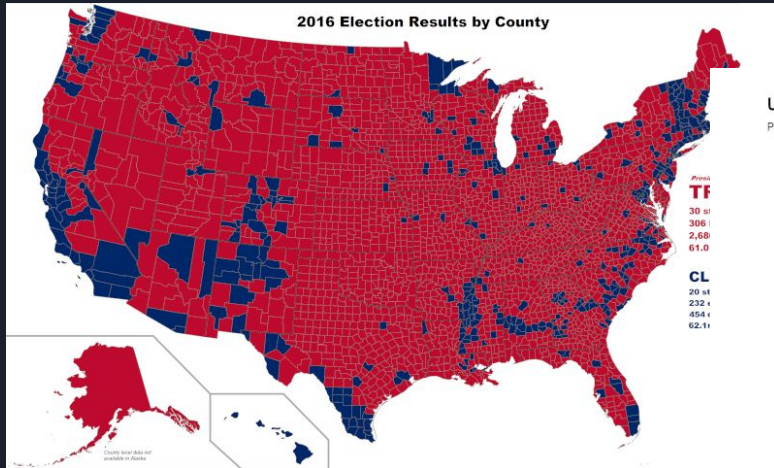


GADMTools

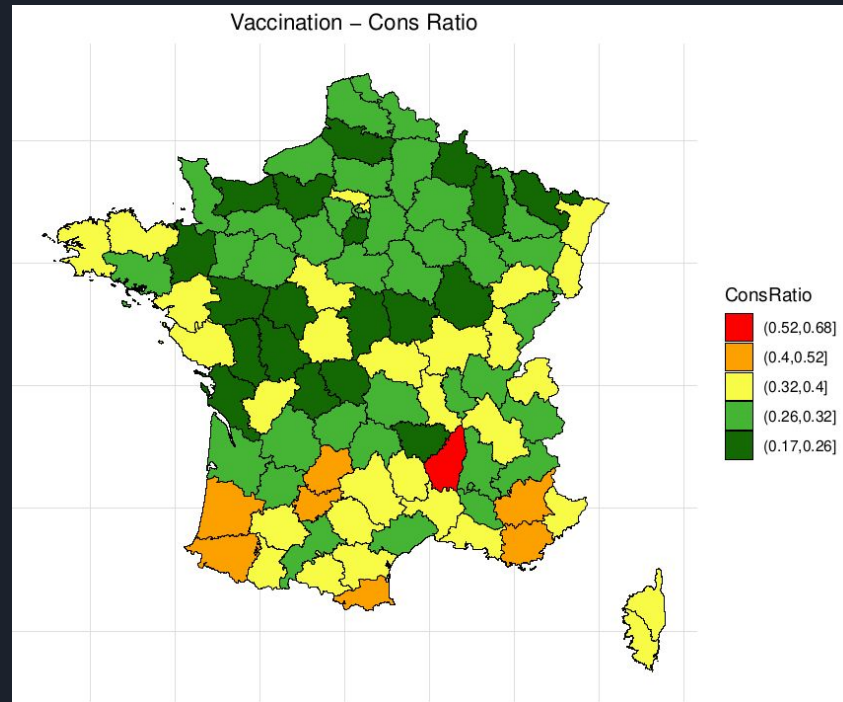
...Ok... mais encore?

LE FUTUR

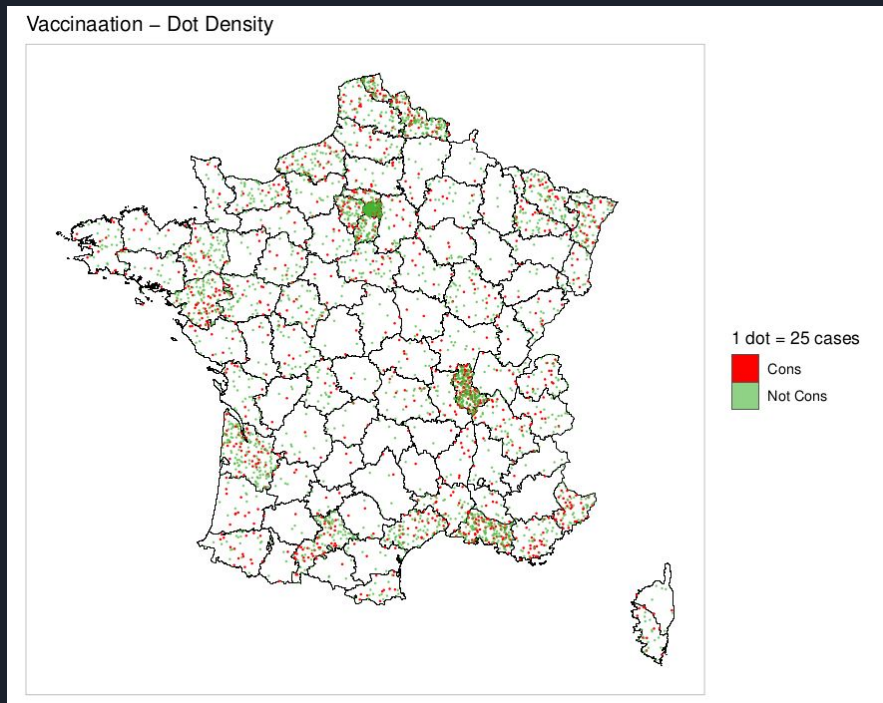
Le Dot Density Mapping



Dot Density vs Choropleth

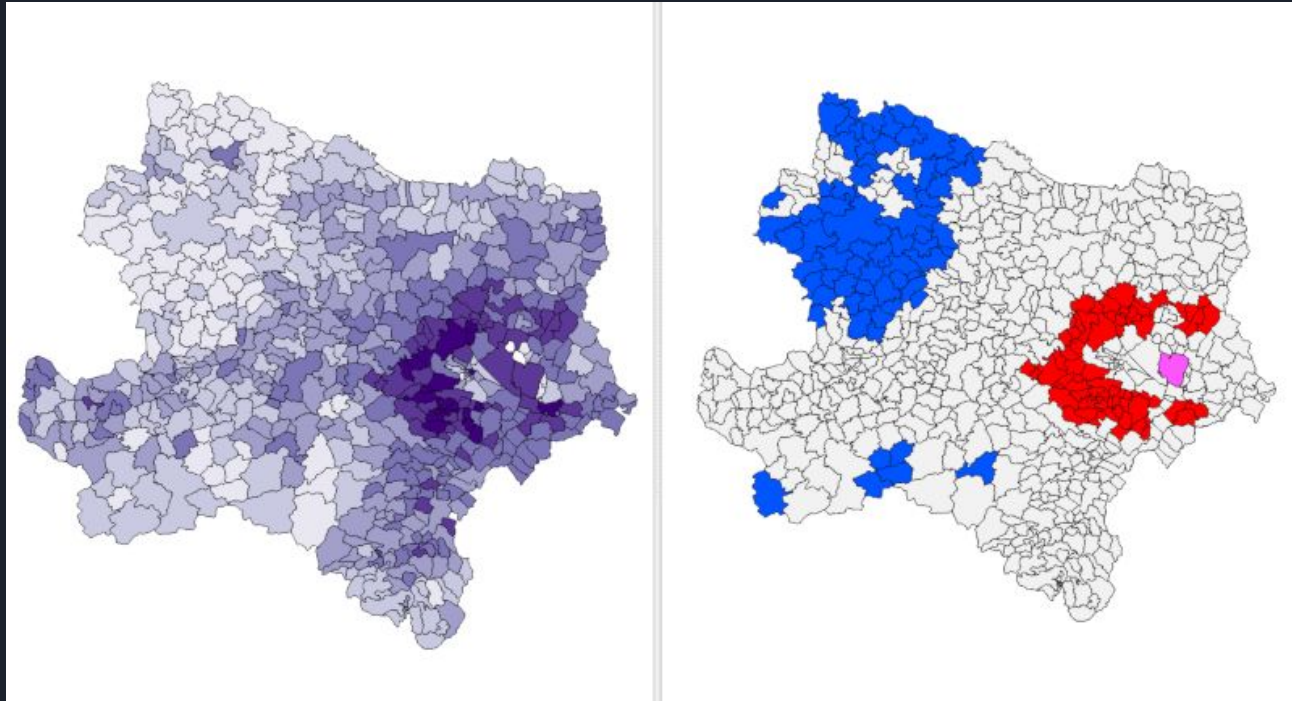


Dot Density vs Choropleth

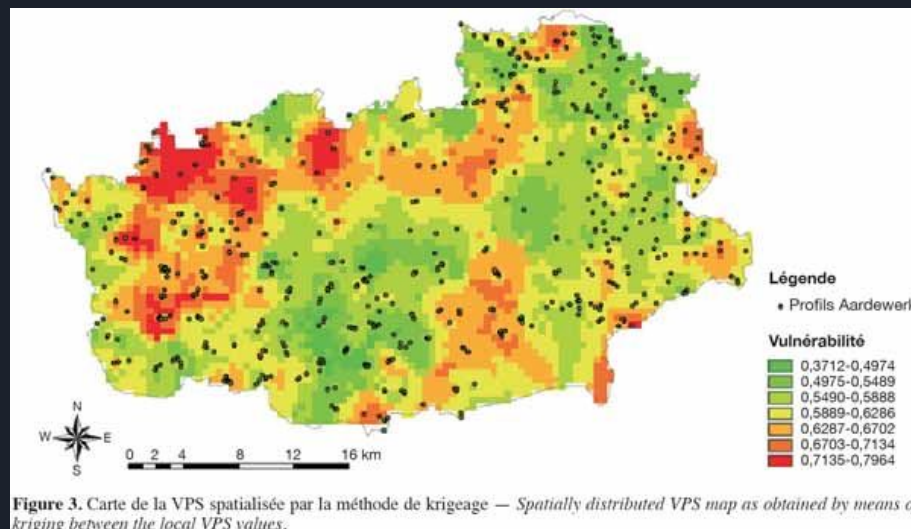
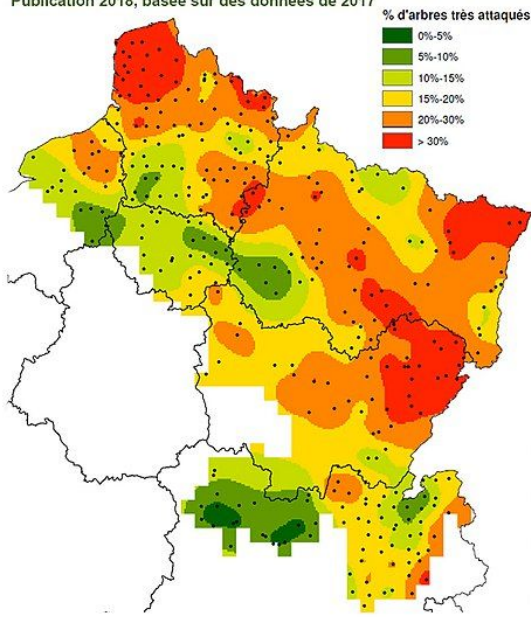


GADMTools

analyse spatiale - Moran I



Enquête sur l'impact de la chararose en zone contaminée
% de frênes très atteints estimé par krigeage ordinaire
Publication 2018, basée sur des données de 2017





GADMTools
le futur c'est...

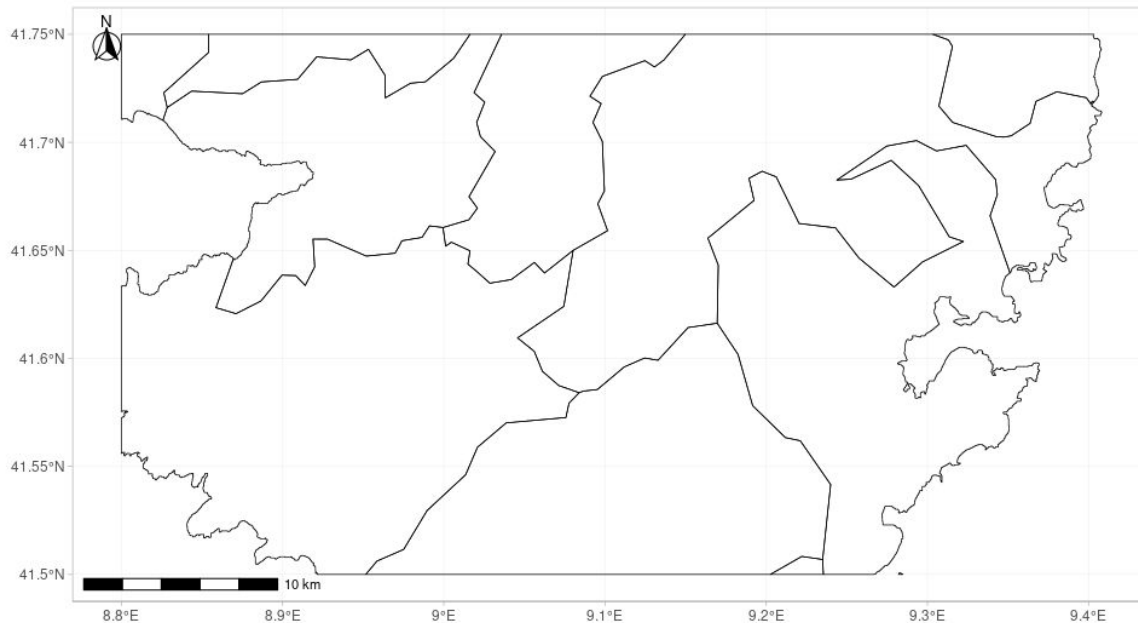
sftoolkit

Une alternative à *rmapshaper*



sftoolkit

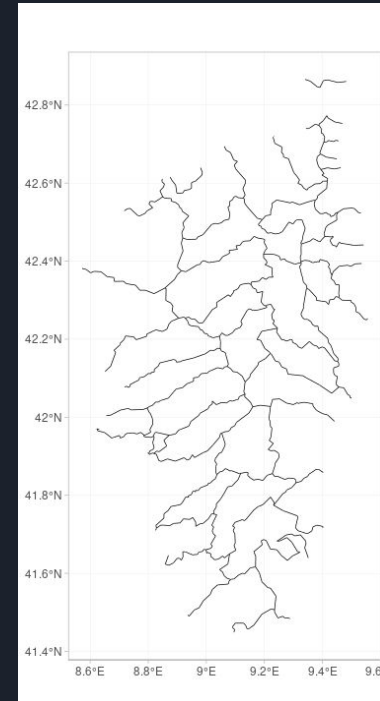
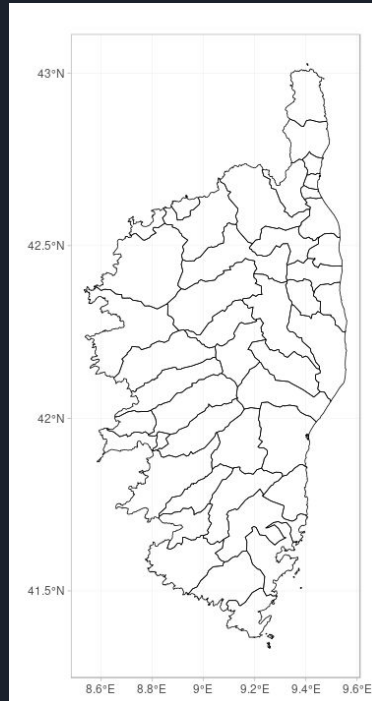
sft_removeIslands





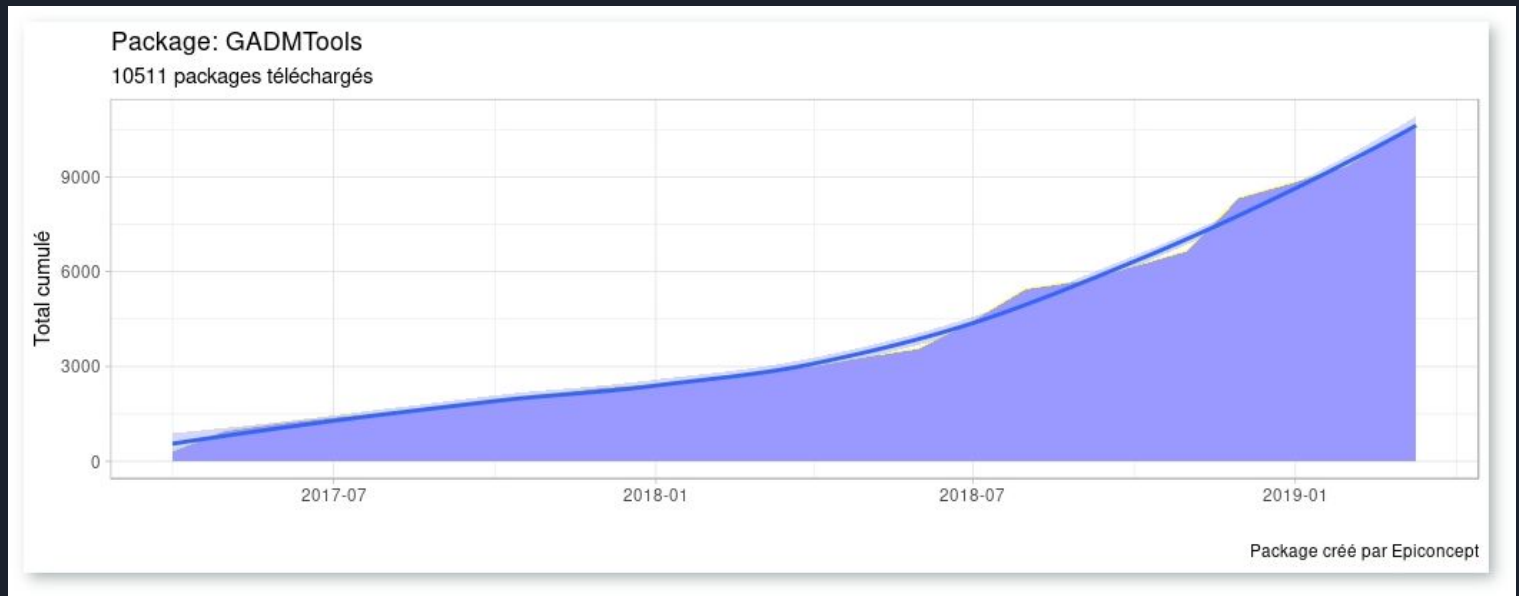
sftoolkit

sft_innerlines



GADMTools

les utilisateurs l'apprécient.





GADMTools

ça fait plaisir...de faire plaisir!



Grenfell lab

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Caroline E. Wagner

Postdoctoral Fellow at Princeton University
Grenfell lab

" I really love the GADM Tools package!
Thanks for such a useful resource."

GADMTools

et... merci aux utilisateurs!

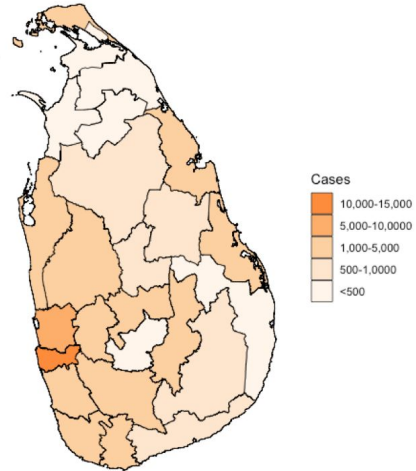


Fig. 1: Average number of yearly reported dengue cases by district in Sri Lanka between 2010-2017.

Source: Epidemiology Unit, Ministry of Health, Sri Lanka

