

GADMTools

Meetup Nantes 25 Mars 2019

epiconcept

Smart Search



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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

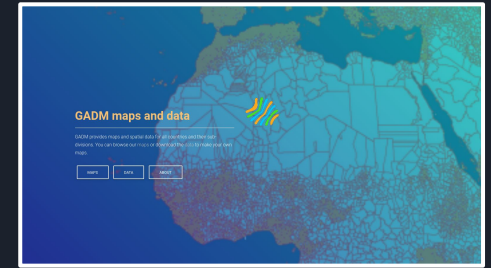
Simple à utiliser

Opensource

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 :

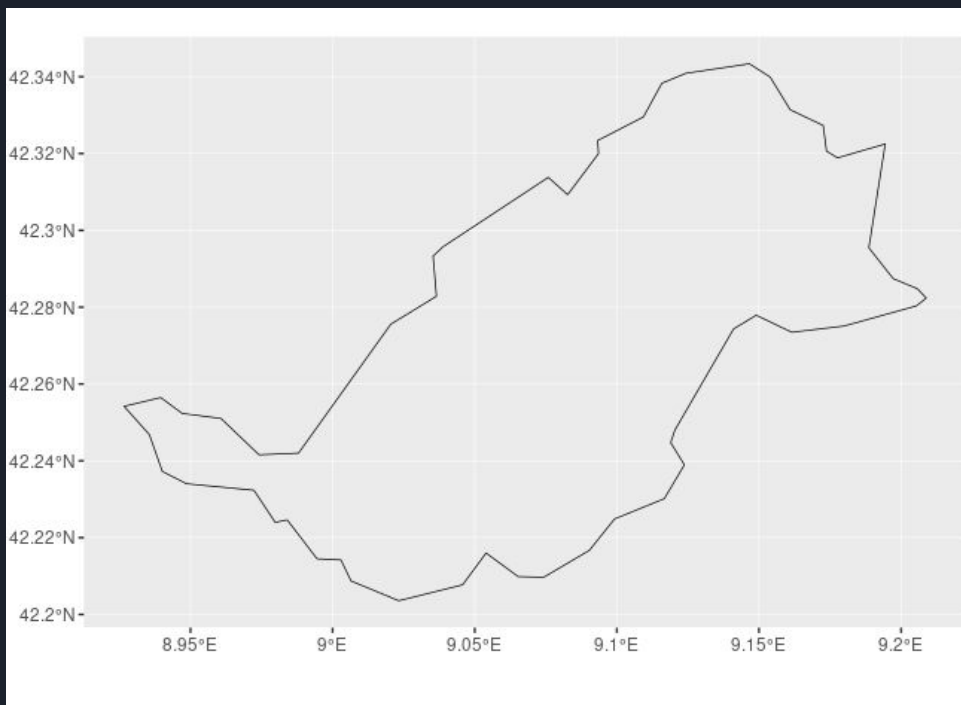
```
library(GADMTools)
```

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

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

```
gadm_plot(Corte)
```

le canton de Corte en - de 1mn



TADA!

The logo consists of two overlapping parallelograms, one blue and one light green, positioned to the left of the text.

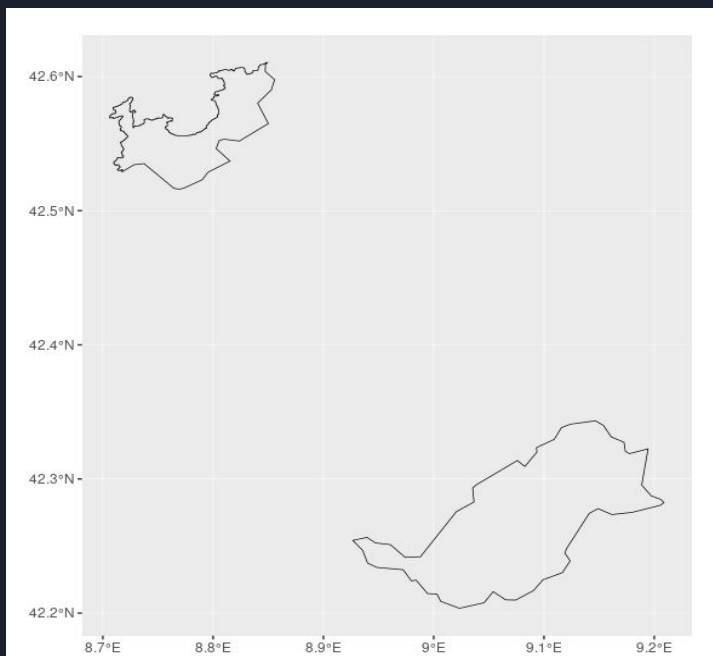
GADMTools

je veux Calvi en + sur la même map!

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

```
gadm_plot(CC)
```

les cantons de Calvi et Corte



TADA
AGAIN!!!



GADMTools

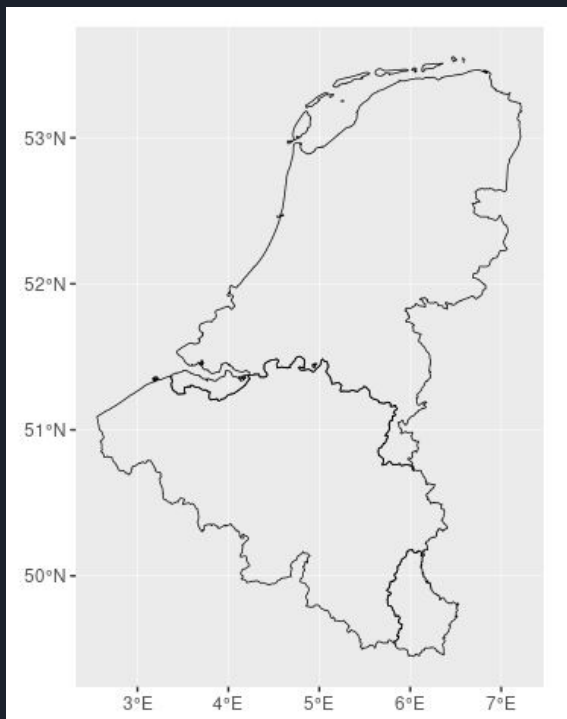
et le benelux, c'est possible?

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

```
gadm_plot(BNLX)
```

GADMTools

le Benelux en image...



BE NE LUX



GADMTools

et c'est possible de voir la Corse?

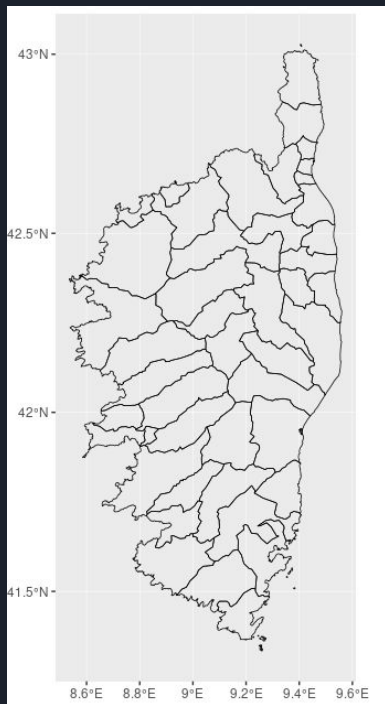
```
Corse <-gadm_subset(FRA, 1, "Corse")
```

```
gadm_plot(Corse)
```



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et voilà la Corse @ level 4!



CANTONS CORSES

The logo consists of two overlapping parallelograms, one blue and one light green, positioned diagonally.

GADMTools

...non, les départements de la Corse

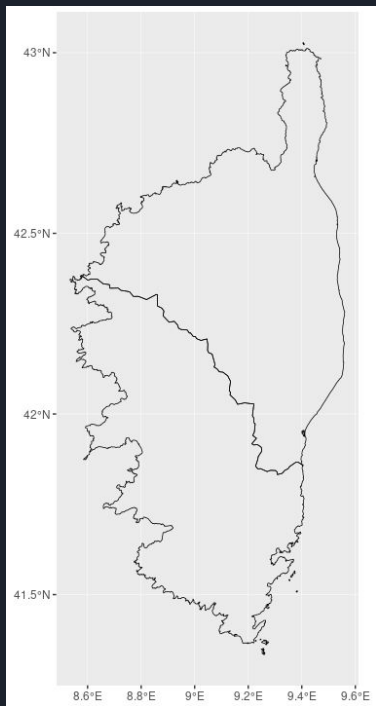
```
Deps <- gadm_union(Corse, level=2)
```

```
gadm_plot(Deps)
```



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et voilà la Corse @ level 2!



DÉPARTEMENTS
CORSES



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et un joli fond, c'est possible?

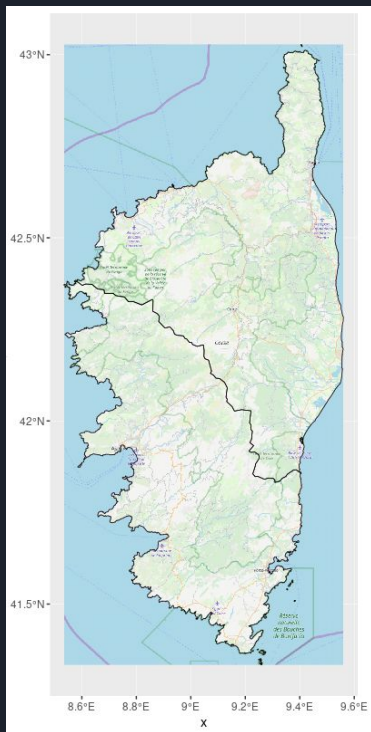
```
Deps <- gadm_getBackground(  
  Deps,  
  name = "BG_Corse",  
  clip=FALSE)
```

```
gadm_plot(Deps)
```



GADMTools

...merci OpenStreetMap!



PACKAGES

rosm & raster



GADMTools

...j'aime pas la mer!

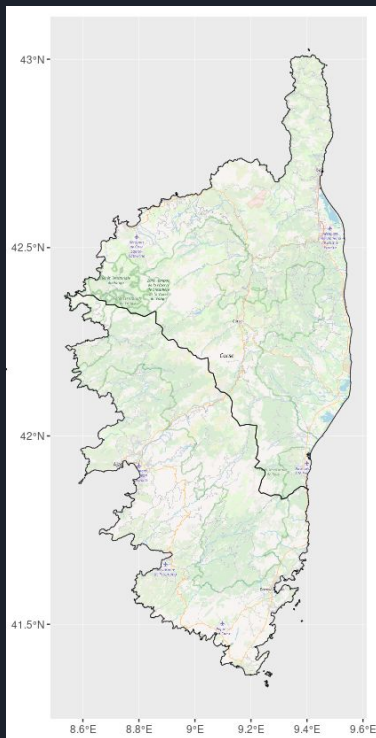
```
Deps <- gadm_getBackground(  
  Deps,  
  name = "BG_Corse")
```

```
gadm_plot(Deps)
```



GADMTools

...merci encore OpenStreetMap!



La CORSE
en 1 clip...



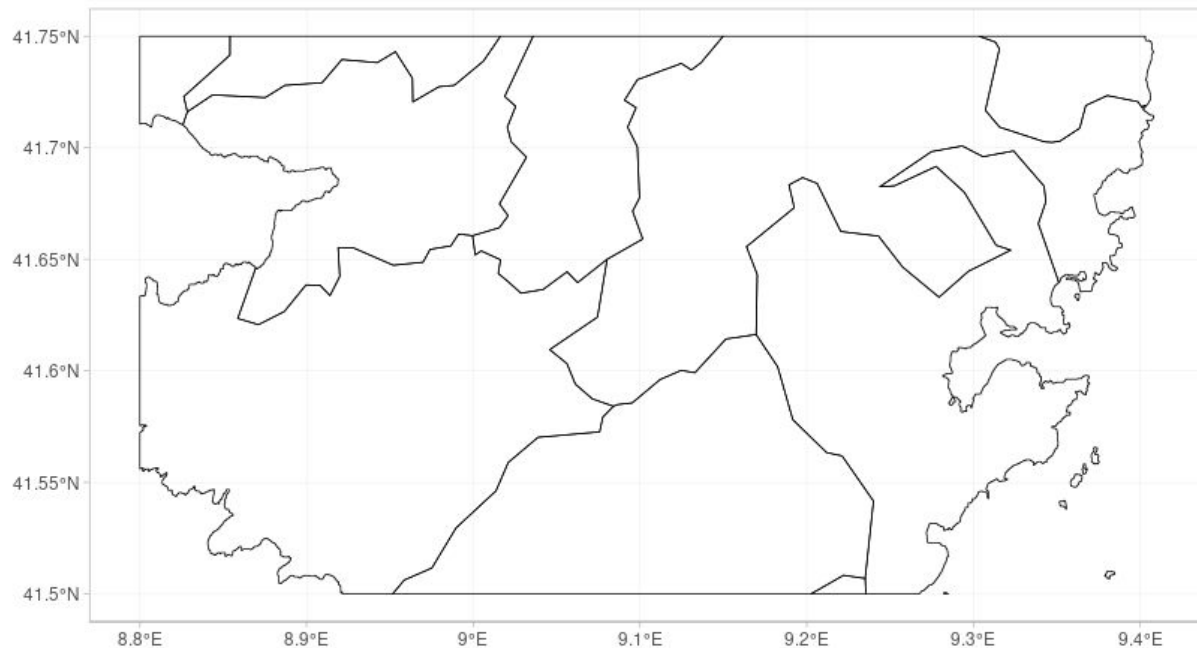
GADMTools

on peut crop(er) aussi...

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

```
gadm_plot(Crop)
```

le crop... pas circle!





GADMTools

...Ok... mais on en fait quoi après?

DES STATS

GADMTools

des choropleths...

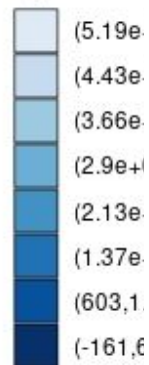
Répartition des spécialistes en France

Data from RPPS



Background map from OpenStreetMap

Specialistes



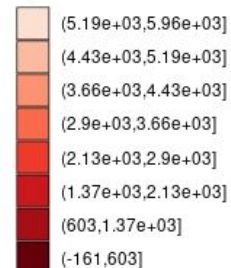
Répartition des spécialistes en France

Data from RPPS



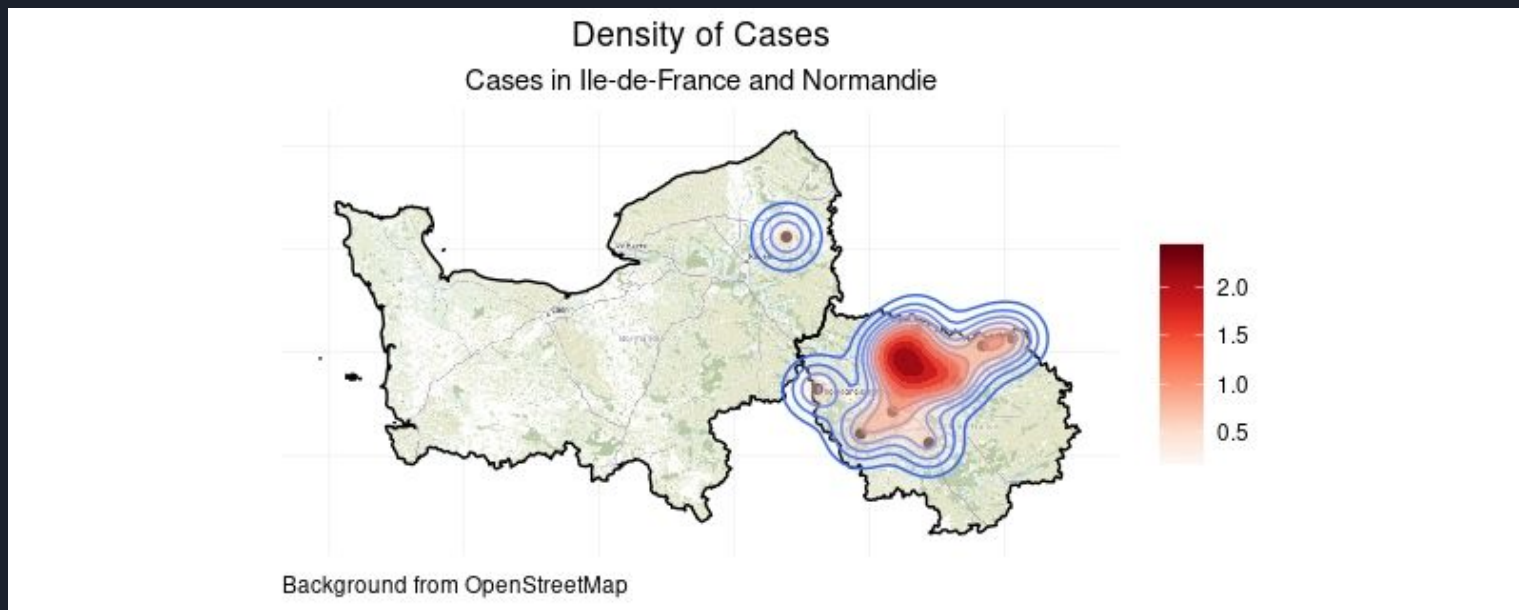
Background map from OpenStreetMap

Specialistes

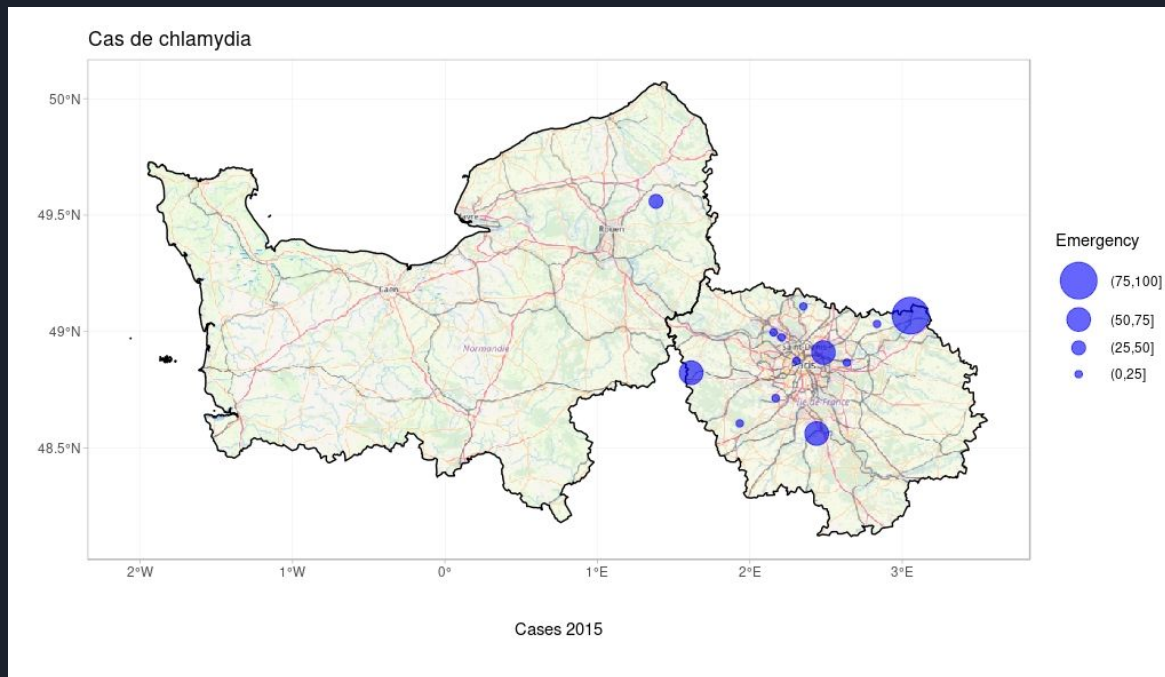


GADMTools

des isopleths...



des points de taille classifiée...

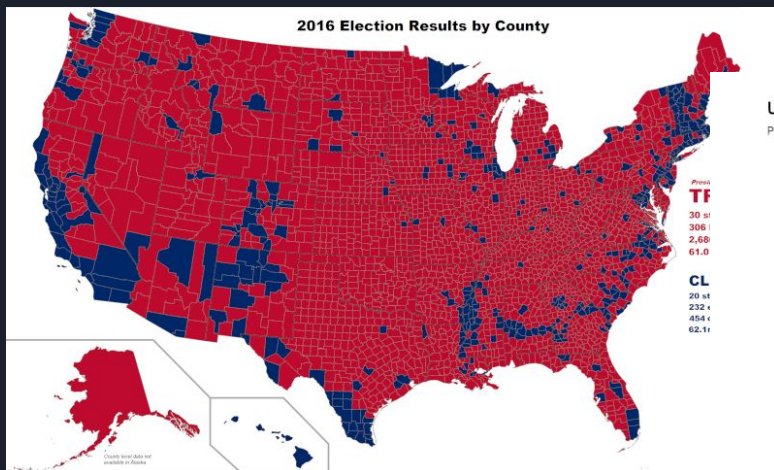




GADMTools

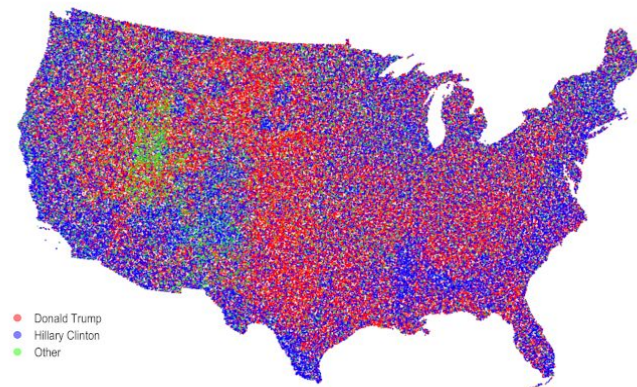
...Ok... mais encore?

LE FUTUR

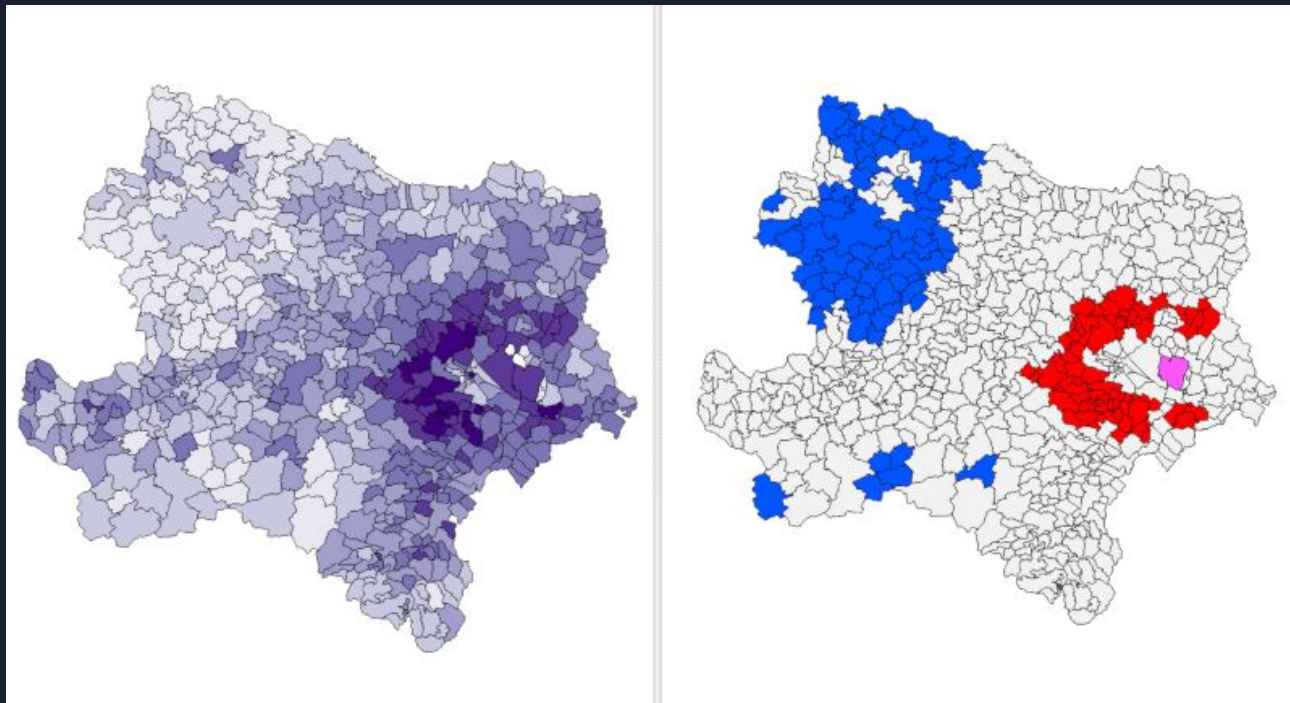


US 2016 Presidential election results

Pointlist variant à la Rankin



Andreas Beger
Vote data from Michael W. Kearney
https://github.com/mkearney/presidential_election_county_results_2016



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

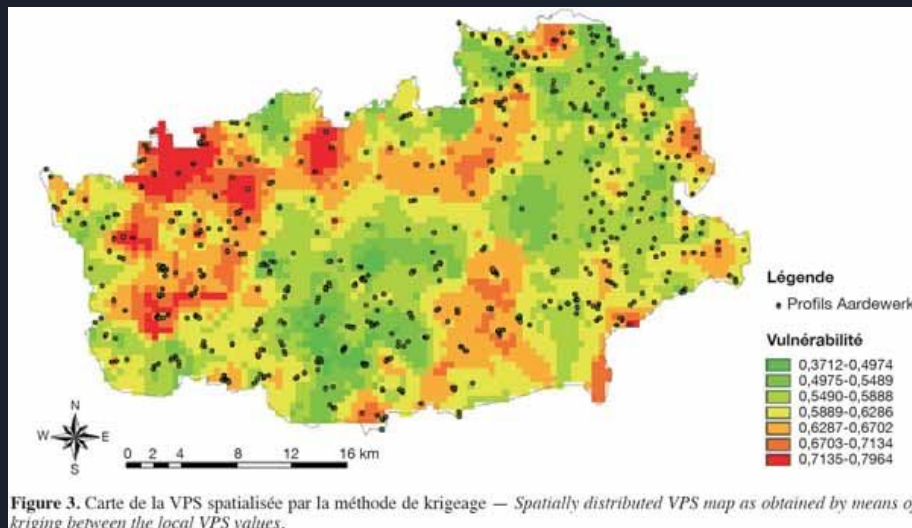
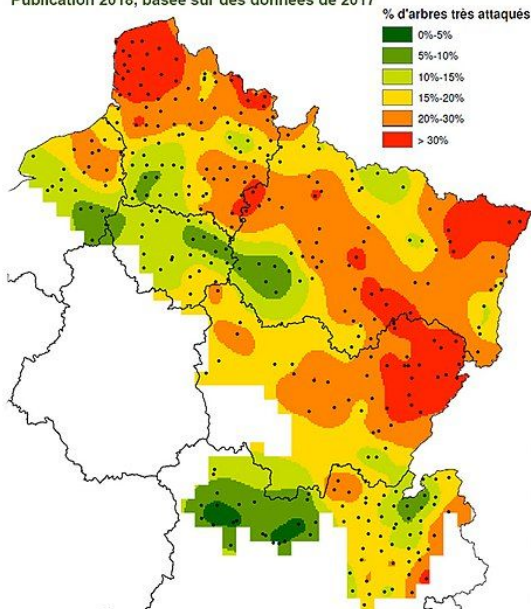


Figure 3. Carte de la VPS spatialisée par la méthode de krigeage — Spatially distributed VPS map as obtained by means of kriging between the local VPS values.



GADMTools
le futur c'est...

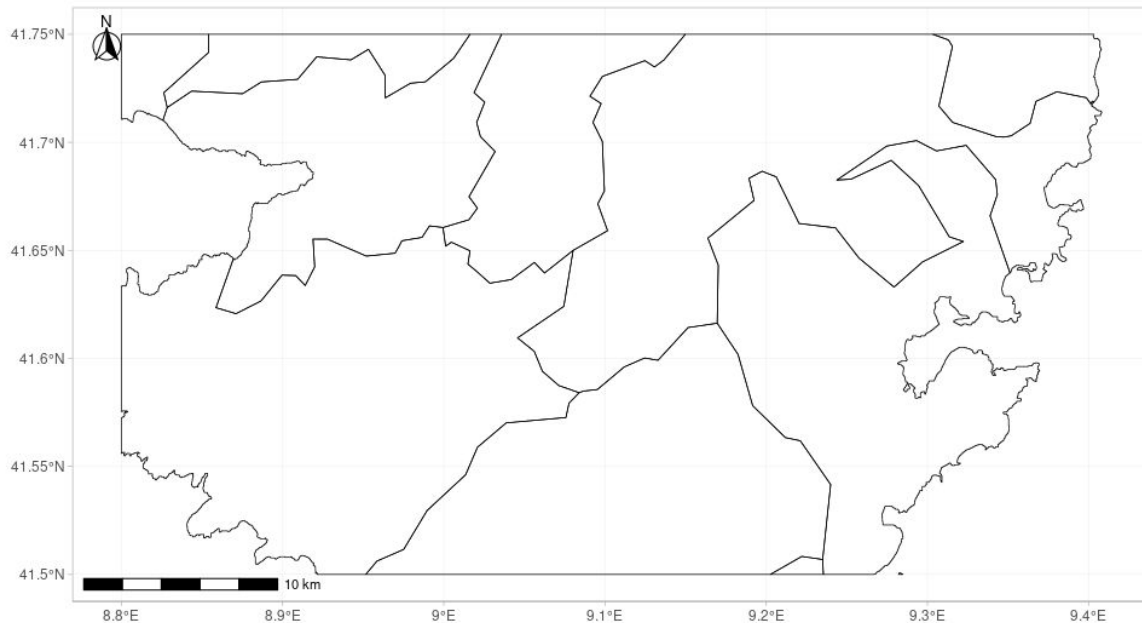
sftoolkit

Une alternative à *rmapshaper*



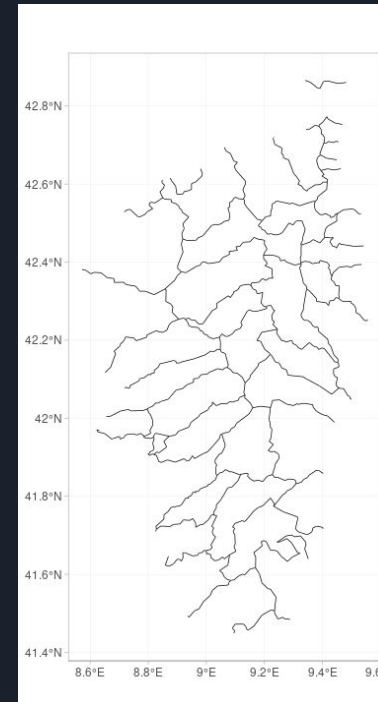
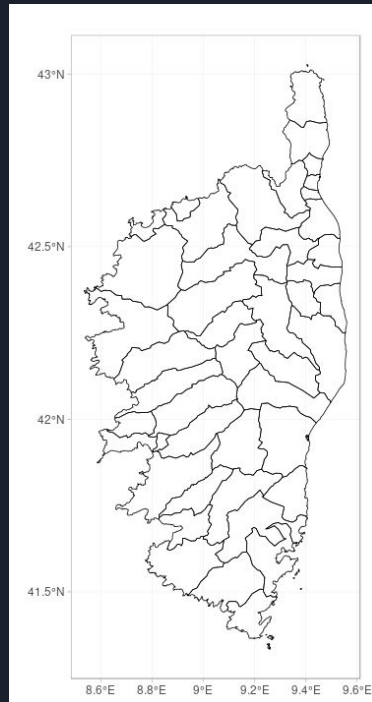
sftoolkit

sft_removelands



sftoolkit

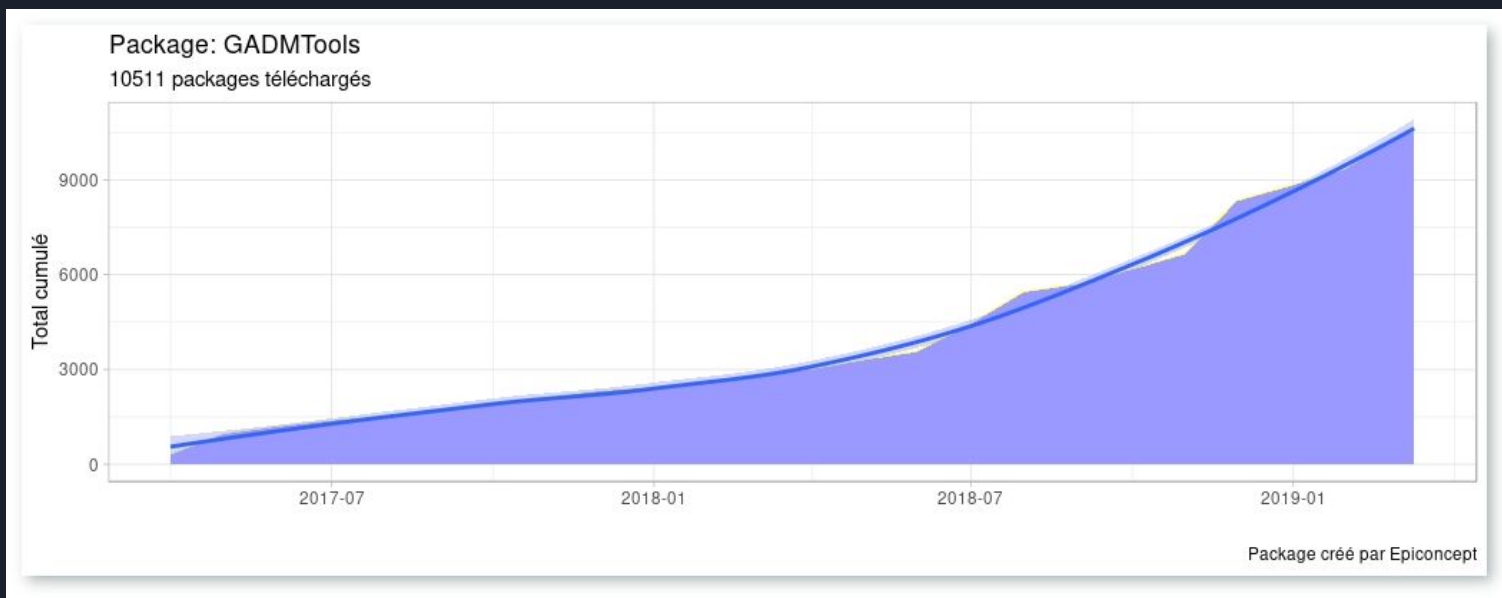
sft_innerlines





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."

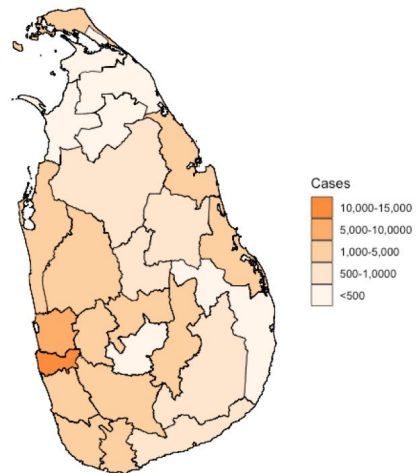


Fig. 1: Average number of yearly reported dengue cases by district in Sri Lanka between 2010-2017.

Source: Epidemiology Unit, Ministry of Health, Sri Lanka

