

Custom Geographic maps with Belgian Administrative Boundaries

- 1) Go to <https://github.com/paulvanmol/belgmap> and download a copy of the repository.
- 2) Select mapsviya.zip and unzip it to a folder on your computer:

This PC > Data (D:) > Workshop > belgmap > sasdata

Name	Date modified	Type	Size
district2015.sashdat	10/6/2020 1:49 AM	SASHDAT File	3,497 KB
district2019.sashdat	10/6/2020 1:49 AM	SASHDAT File	1,010 KB
features_properties.sas7bdat	10/6/2020 1:49 AM	SAS Data Set	12,992 KB
municipality2015.sashdat	10/6/2020 1:49 AM	SASHDAT File	3,397 KB
municipality2019.sashdat	10/6/2020 1:49 AM	SASHDAT File	3,004 KB
municipalsection2015.sashdat	10/6/2020 1:49 AM	SASHDAT File	7,423 KB
municipalsection2019.sashdat	10/6/2020 1:49 AM	SASHDAT File	4,076 KB
province2015.sashdat	10/6/2020 1:49 AM	SASHDAT File	1,904 KB
province2019.sashdat	10/6/2020 1:49 AM	SASHDAT File	554 KB
region2015.sashdat	10/6/2020 1:49 AM	SASHDAT File	972 KB
region2019.sashdat	10/6/2020 1:49 AM	SASHDAT File	290 KB
statisticsector2015.sashdat	10/6/2020 1:49 AM	SASHDAT File	17,023 KB
statisticsector2019.sashdat	10/6/2020 1:49 AM	SASHDAT File	15,262 KB

- 3) Go to SAS Drive and login as a user with Administrative Capabilities (on our training image: Christine+Student1

- 4) Import Polygon datasets:

There are polygon datasets with information of municipalities in 2015 and 2019. \$
To load the maps of the most recent information you can select the maps with the 2019 suffix.

- Region: region2019.sashdat
- Province: province2019.sashdat
- District/Arrondissement: district2019.sashdat
- Municipality: municipality2019.sashdat
- MunicipalSection: municipalsection2019.sashdat
- StatisticalSector: statisticalsection2019.sashdat

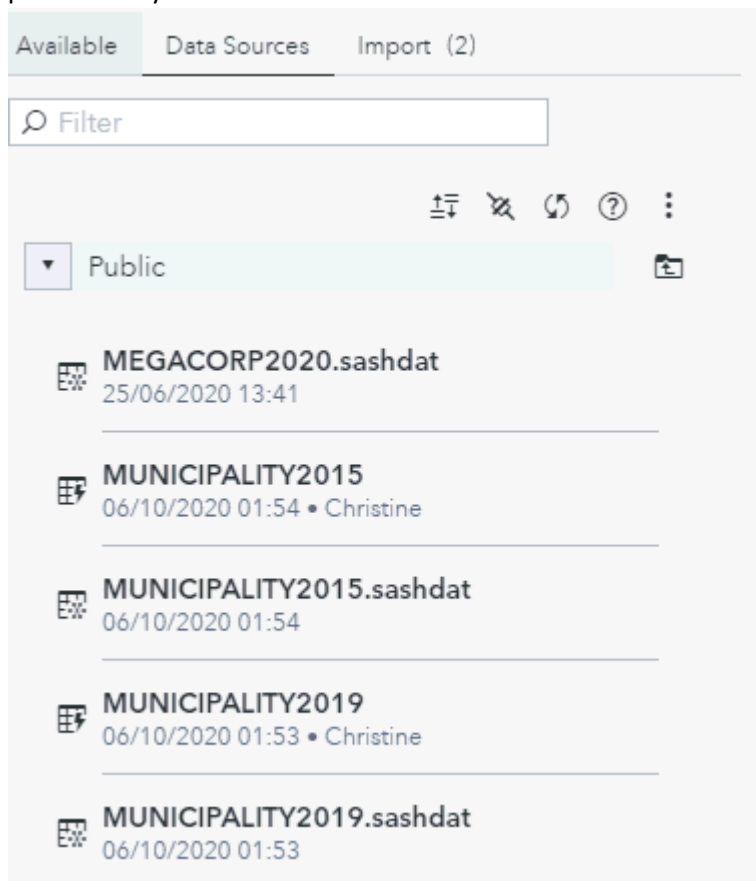
To load the polygon dataset in memory, you can import them

- 5) Select Manage Data>Import>Local Files>
- 6) Select /belgmap/sasdata/municipality2019.sashdat and municipality2015.sashdat

The screenshot shows the 'Import (1)' tab in the SAS Data Explorer. On the left, a list of imports shows 'municipality2019.sashdat' as a local file. On the right, the configuration for this import is displayed:

- Target table name:** municipality2019
- Target location:** cas-shared-default/Public
- ☐ Save as an in-memory table only
- If target table name exists:**
 - ☐ Cancel import
 - ☒ Replace file
- Label:** Enter label
- Format:** sashdat
- Advanced:**
 - ☒ Unique ID (Off)
 - ☐ Create unique ID column
 - New column name: Unique_ID
 - ☒ Replace column if it already exists

- 7) Select Data>Data Sources>Public and verify that the imported files are now available in your public library



The datasets contain both the NISCODE and the IDNAME as keys to the geographical regions.

Create a Report on Road Accidents in Belgium:

Go to Explore and Visualize to access Visual Analytics.

To insert some relevant data, you can download Accidents data for 2019:

<https://statbel.fgov.be/en/open-data/road-accidents-2019>

TF_Accidents_2019.xlsx.

Select Import Local Files>

×

Add to Import - Microsoft Excel File

Select the worksheets to import:

☒ Select all


☒ TF_ACCIDENTS_2019

▼

 Default import settings

Target location: *

cas-shared-default/Public




If the table already exists in the specified location:

☐ Cancel import


☒ Replace file


Add

Cancel



Finish by clicking Import Item and then click OK.

 TF_ACCIDENTS_2019.xlsx
Import Item

Target table name: *
Target location: * 

☐ Save as an in-memory table only

If target table name exists:

☐ Cancel import
☒ Replace file

Label:
Format: @

File Specifications Advanced

☒ Specify a worksheet to import:

☒ First row contains column names

☐ Limit the range of imported rows and columns

In the Data Panel:

You can select the Data Items:

CD_MUNTY_REFNIS (Niscode of Municipality).

Change the Classification from Category to Geography

Data

TF_ACCIDENTS_2019_TF_ACCIDEN... ▼

 Filter

 New data item

▼ Category

 CD_DSTR_REFNIS - 43

 CD_MUNTY_REFNIS - 580

 CD_PROV_REFNIS - 11

 CD_RGN_REFNIS - 3

In the window: Edit Geography Item:

In the Geography Data:

Select Geographic data provider

Geographic Data provider: select New

Edit Geography Item

Name:

CD_MUNTY_REFNIS

Based on:

CD_MUNTY_REFNIS

Geography data:

Geographic data provider

Geographic data provider:*

Choose provider

Region ID:*

Choose column

Latitude (y):

Choose column

Longitude (x):

Choose column

Coordinate Space:

World Geodetic System (WGS84)

Map available

New

Edit

In the window: New Geographic Data Provider:

Enter following information:

Name: BE_Municipality_REFNIS

Label: BE Municipality REFNIS 2019

Type: CAS Table

Server: cas-shared-default

Library: Public

Table: Municipality2019

New Geographic Data Provider

Name:*

Municipality2019

Label:*

Municipality 2019

Type:

CAS Table

Server:

cas-shared-default

Library:

Public

Table:

MUNICIPALITY2019

ID Column:

OK

Cancel

Fill in additional columns:

ID Column: niscode

Sequence Column: __seq__

Advanced: Segment Column: Segment

New Geographic Data Provider

ID Column:

 niscode ▼

Sequence Column:

 __seq__ ▼

▼ Advanced

Segment Column:

 SEGMENT ▼

Latitude (y) Column:

 Y ▼

Longitude (x) Column:

 X ▼

Coordinate Space:*

EPSG:4326

OK

Cancel

Once the Geographic Data Provider is created, fill in the Region ID: to the CD_MUNTY_REFNIS.

Check out

Edit Geography Item

Name:

CD_MUNTY_REFNIS

Based on:

CD_MUNTY_REFNIS

Geography data:

Geographic data provider

Geographic data provider:*

Municipality 2019

Region ID:*

CD_MUNTY_REFNIS

Latitude (y):

Choose column

Longitude (x):

Choose column

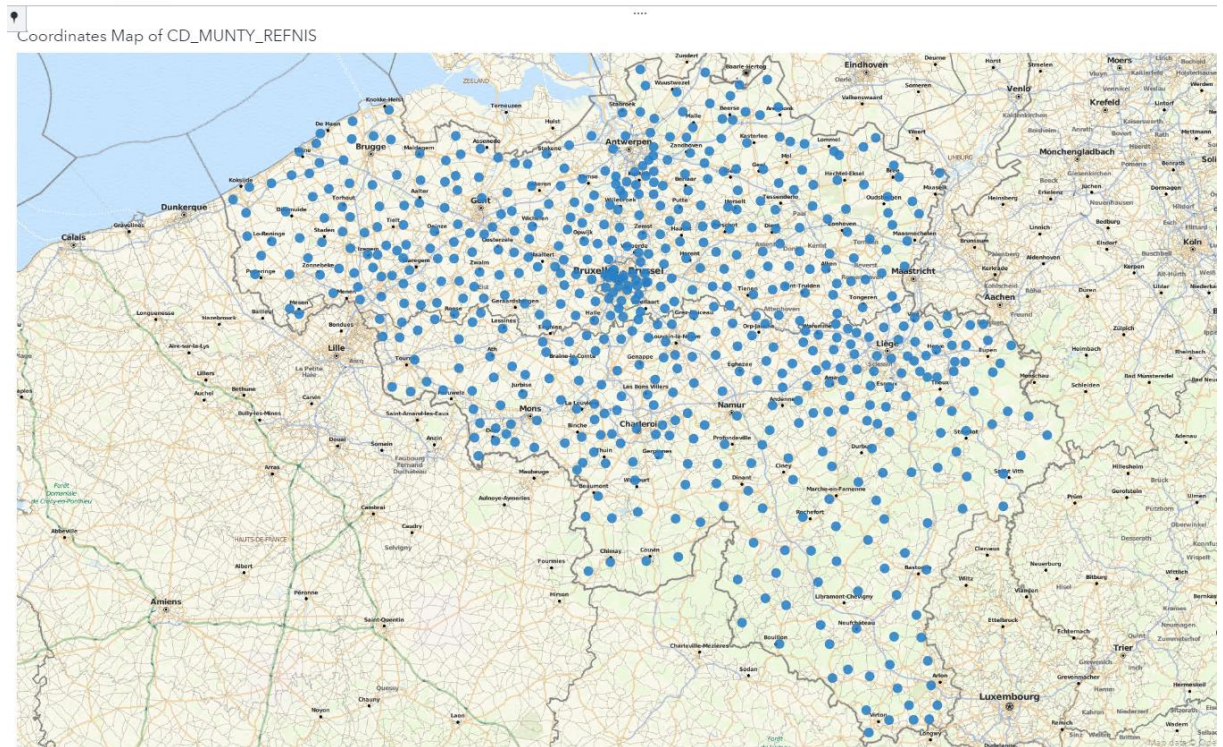
100 % mapped



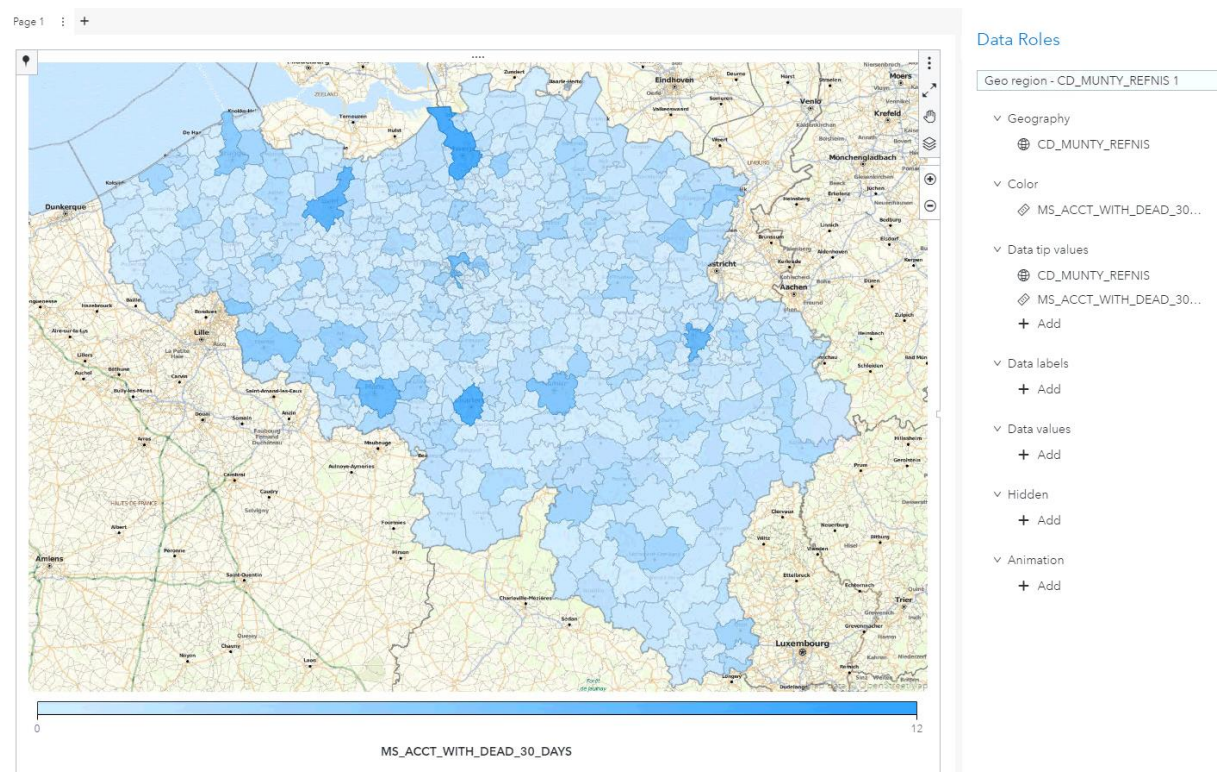
OK

Cancel

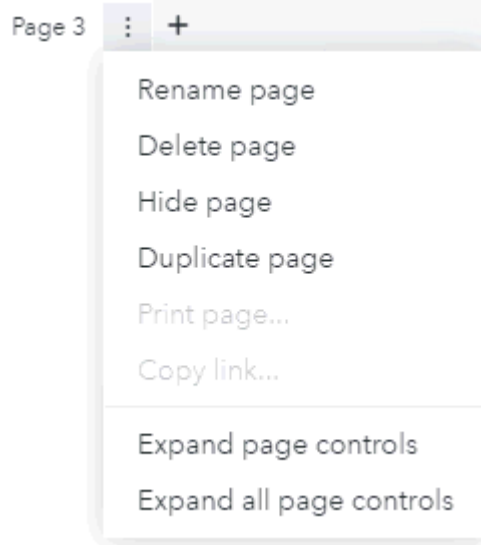
Add the CD_MUNTY_REFNIS to the Report: Using AutoChart, the default Visualization is a Geographic Coordinate Map using Frequency as Measure.



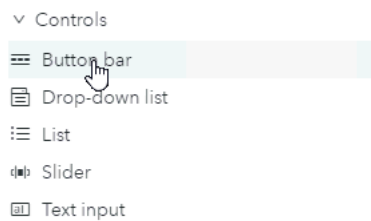
You can change the Coordinates map to a Region Map:
 Select the snowman menu of the Visualisation and change it to Region Map.
 And add the Measure MS_ACCT or MS_ACCT_With_DEAD_30_Days:



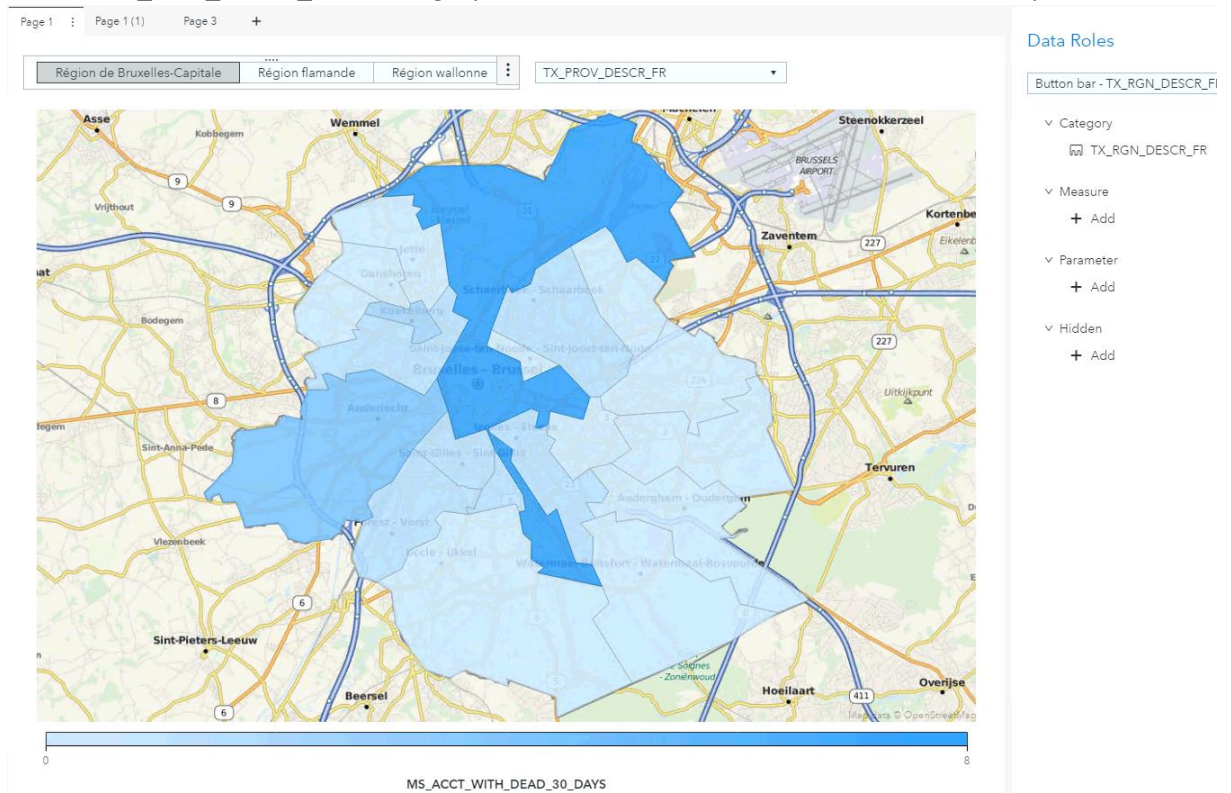
Add a Button Bar to the Control Area of your page:



Drag the Button Bar Control object to the Page Controls area:



Add the TX_RGN_DESCR_FR as category to the button bar and test it to subset the map.



Finally it is also possible to use the combination of a Region and Coordinate map:

- Optional: Add a calculated measure: Percent Deadly Accidents 30 Days
Ratio of $\text{sum}(\text{bygroup}(\text{MS_ACC_WITH_DEAD_30_DAYS})/\text{sum}(\text{bygroup}(\text{MS_ACCT}))$

New Calculated Item

Name:

Result Type: Format:

Base expression:

Data Items Operators **Visual** Text

Search

> Date

> Numeric

- CD_BUILD_UP_AREA
- CD_COLL_TYPE
- CD_DAY_OF_WEEK
- CD_LIGHT_COND
- CD_ROAD_TYPE
- DT_HOUR
- Frequency
- MS ACCT

(Sum [ByGroup_] (MS_ACCT_WITH_D EAD_30_DAYS) / Sum [ByGroup_] (MS_ACCT))

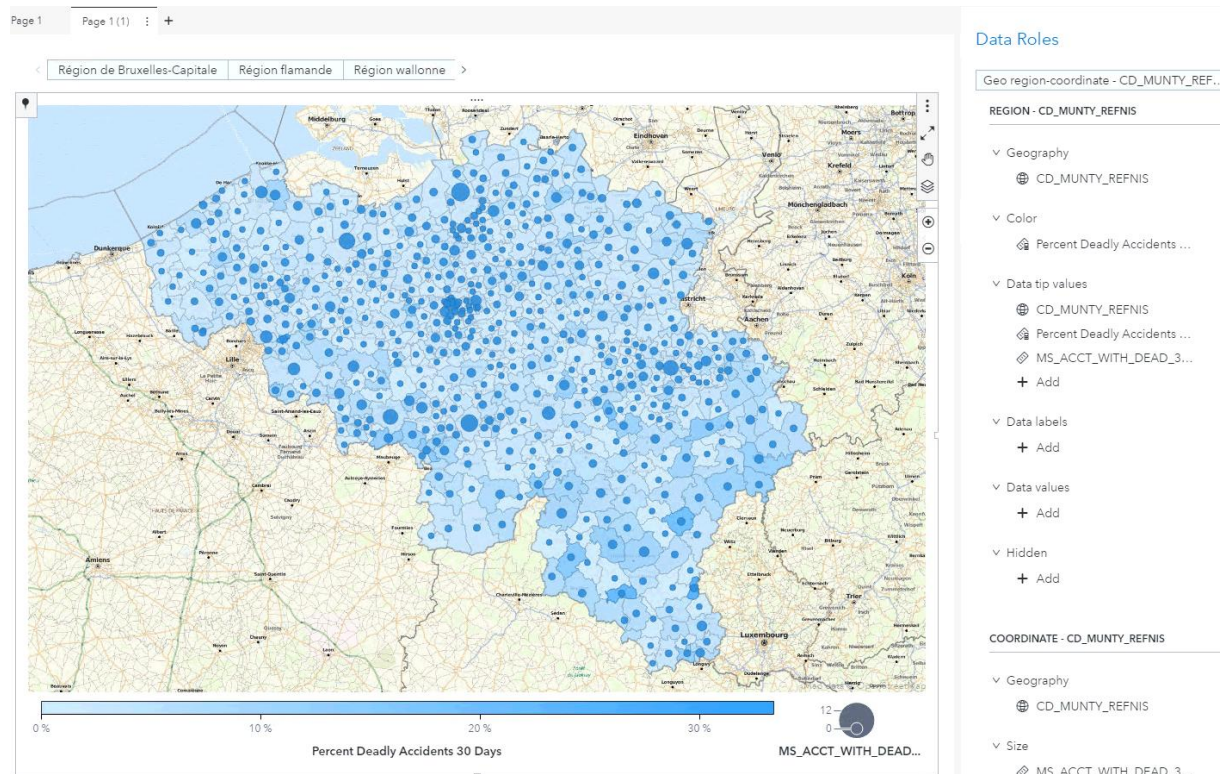
Make a copy of the previous page:

Change the Map object to Region-Coordinate map:

It allows you to create a map with 2 layers:

Region Map: use CD_MUNTY_REFNIS as Geography + Percent Deadly Accidents 30 Days to color the regions.

On the Coordinate Map, use the MS_ACC_DEAD_30_DAYS to size the Bubbles.



Save your report in the Folder: My Folder >Belgium Geo Maps

Save your data settings as a Data View:

×

Save Data View



No data views

Name:

TF_ACCIDENTS_2019_Refnis2019

Description:

Accidents 2019 refnis 2019 |

☒ Default data view

☒ Shared data view

Save

Cancel