FOODSHED : Is there a specific spatial signature in short supply chain (Case Beef)? around Avignon (South of France)

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Tuesday, 30 August, 2022, Henry Daysh Building - Session : 138 ; **Analyzing and mapping proximities of recovery for food sensitive planning, Présentation number 359**

FOODSHED : Is there a specific spatial signature in short supply chain (Case Beef)? around Avignon (South of France)

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CNRS UMR ESPACE AVIGNON 7300 : French National Center for Scientific Research

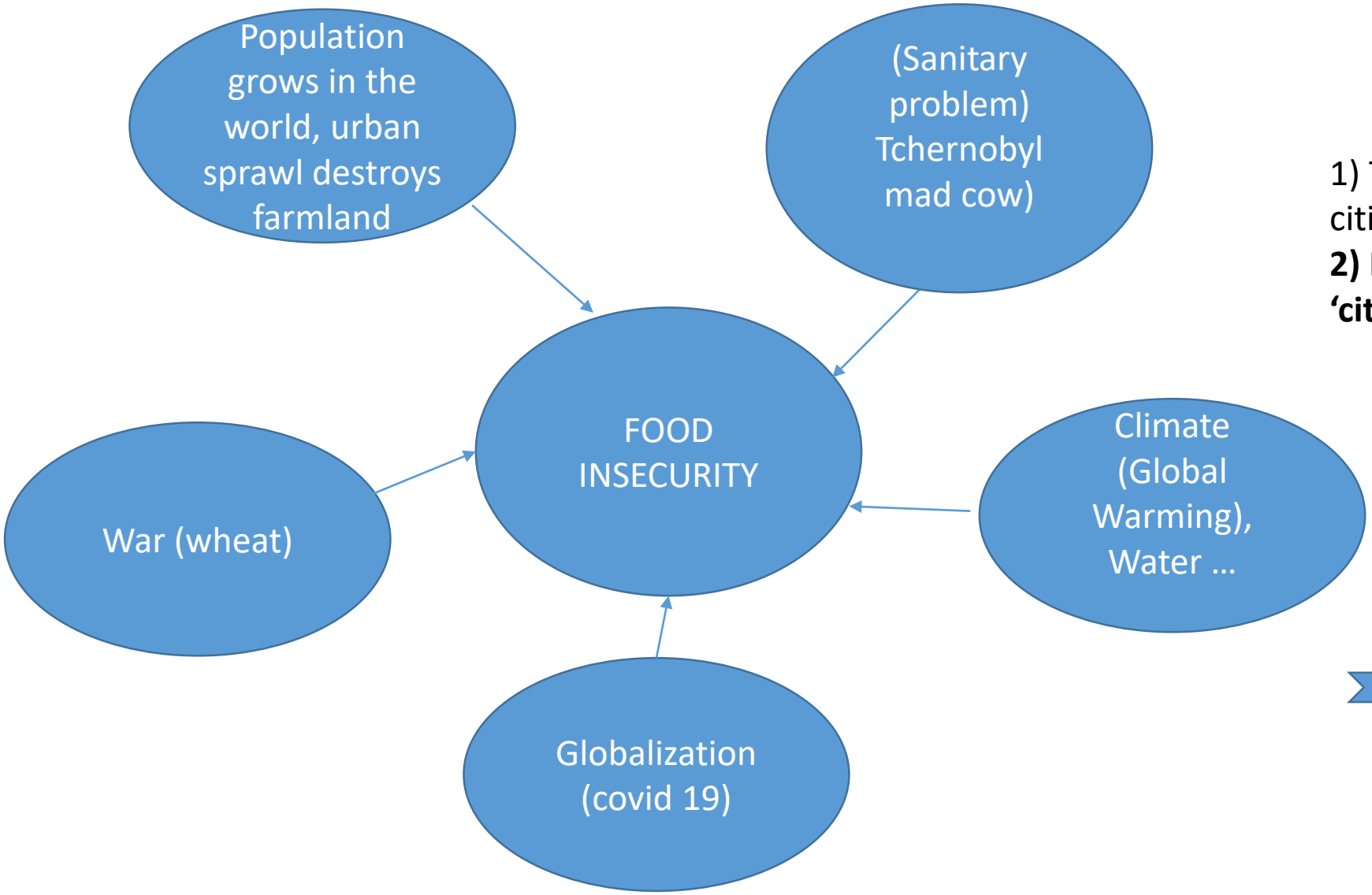
Project: H2020 FoodSHIFT « Food System Hubs Innovation towards Fast Transition by 2030 »

*Speaker

PLAN

- Context
- Research question
- Area Zone of the study
- Data & Méthodology
- Results
- Conclusion

CONTEXT



1) These problems question public policies, citizens and scientists

2) How to (re) connect
'city or region' with its agriculture

Discover new methodology
In spatial analysis to answer these questions

Research Question

EXAMPLE OF A CASE STUDY	THE GOAL
Collective catering in Avignon > Problem of lack of beef (in schools)	CANTEEN : Feed the schools (Quality and origin of the food) -> local approach

(H1) FOODSHED : Is there a specific spatial signature in short supply chain (case of Beef) ?

Foodshed? = spaces close to each other (but not necessarily contiguous) linked by the production, circulation and consumption of a certain product. (definition Kinunen, Nature Food, 2020)

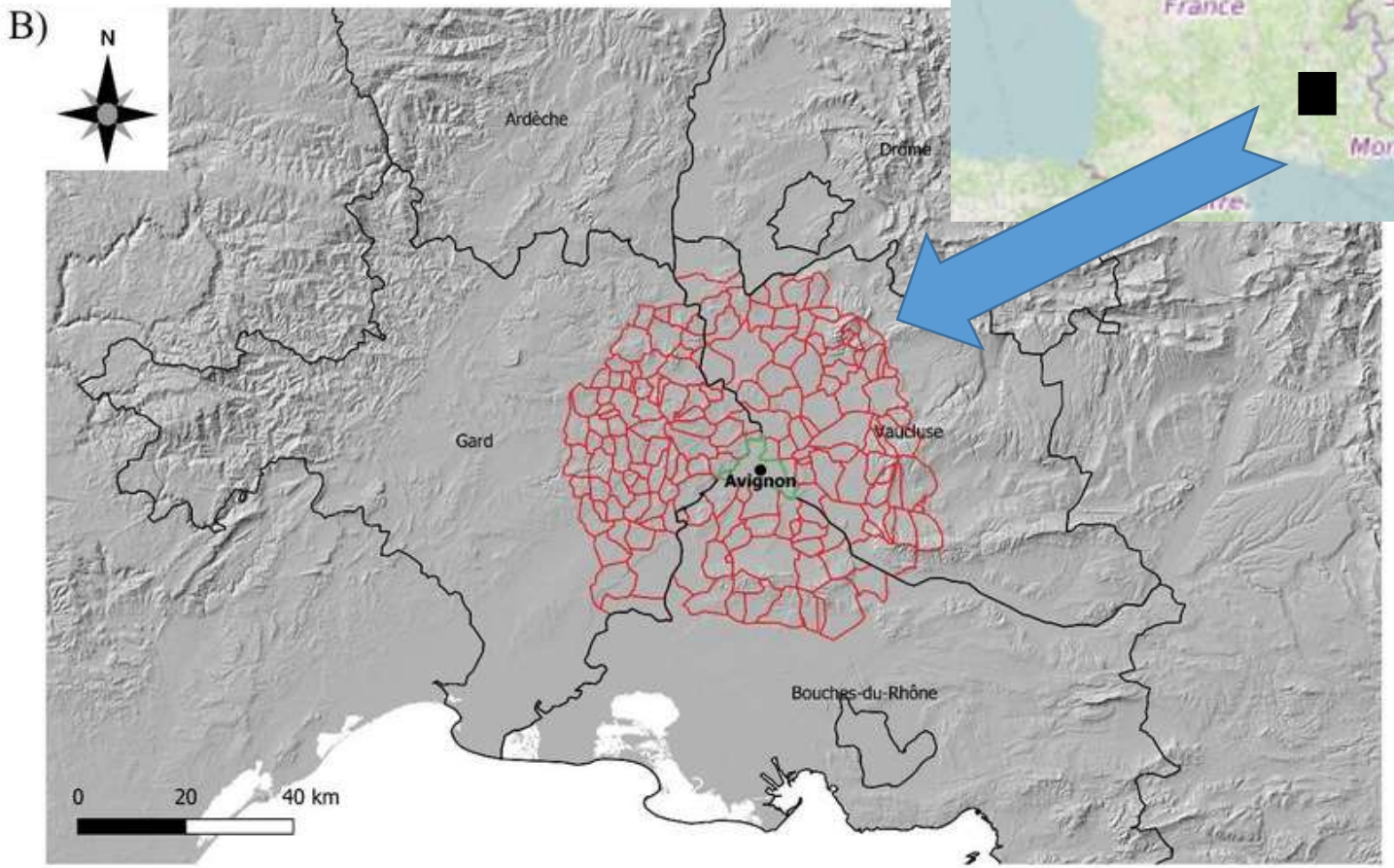
Our objectif

1) Detect the potential food basins in our region (Avignon to 100 KM)

2) To see if there are a SPATIAL specific SIGNATURE IN SSC ? (hypothesis)

3) To produce knowledge (map and statistics) and understand …

Area Zone of the study (Avignon)



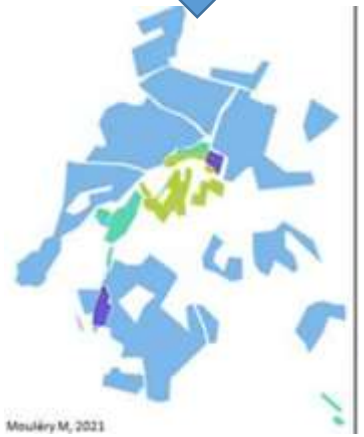
- Population 92 000 inhabitants
- Between 2 rivers Rhone and Durance (water !!)
- Summers are short, very hot, dry , winters are cold, windy
- Agriculture -> fruits and vegetables, **(the biophysical characteristics are not adapted for the pastoral surfaces)**
- Close two departments Ardèche and Drôme

(Advantages -> Pastoral surfaces)

HOW TO CREATE A MAP TO DETECT THE Beef food basins in SSC (Short supply chain) -> Which data sources ?

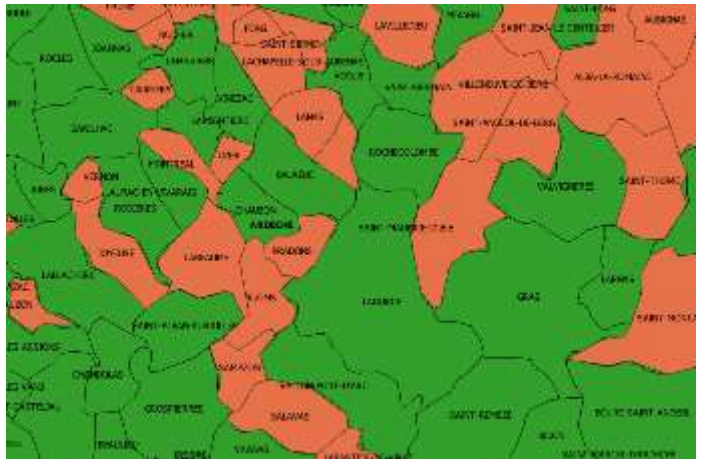
STEP 1 : DATA 1
LAND PARCEL INFORMATION SYSTEM
CAP PRIMES

Select of permanent meadows , temporary meadows , pastoral area, wood



Lack of information of the SSC (beef)

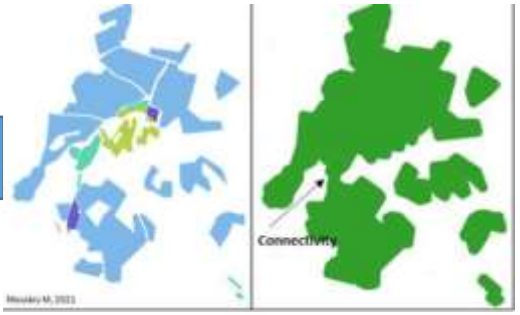
STEP 2 : DATA 2
Census agriculture 2010 (Agreste) -> scale of the city



green commune with cattle farm in SSC
and color orange not

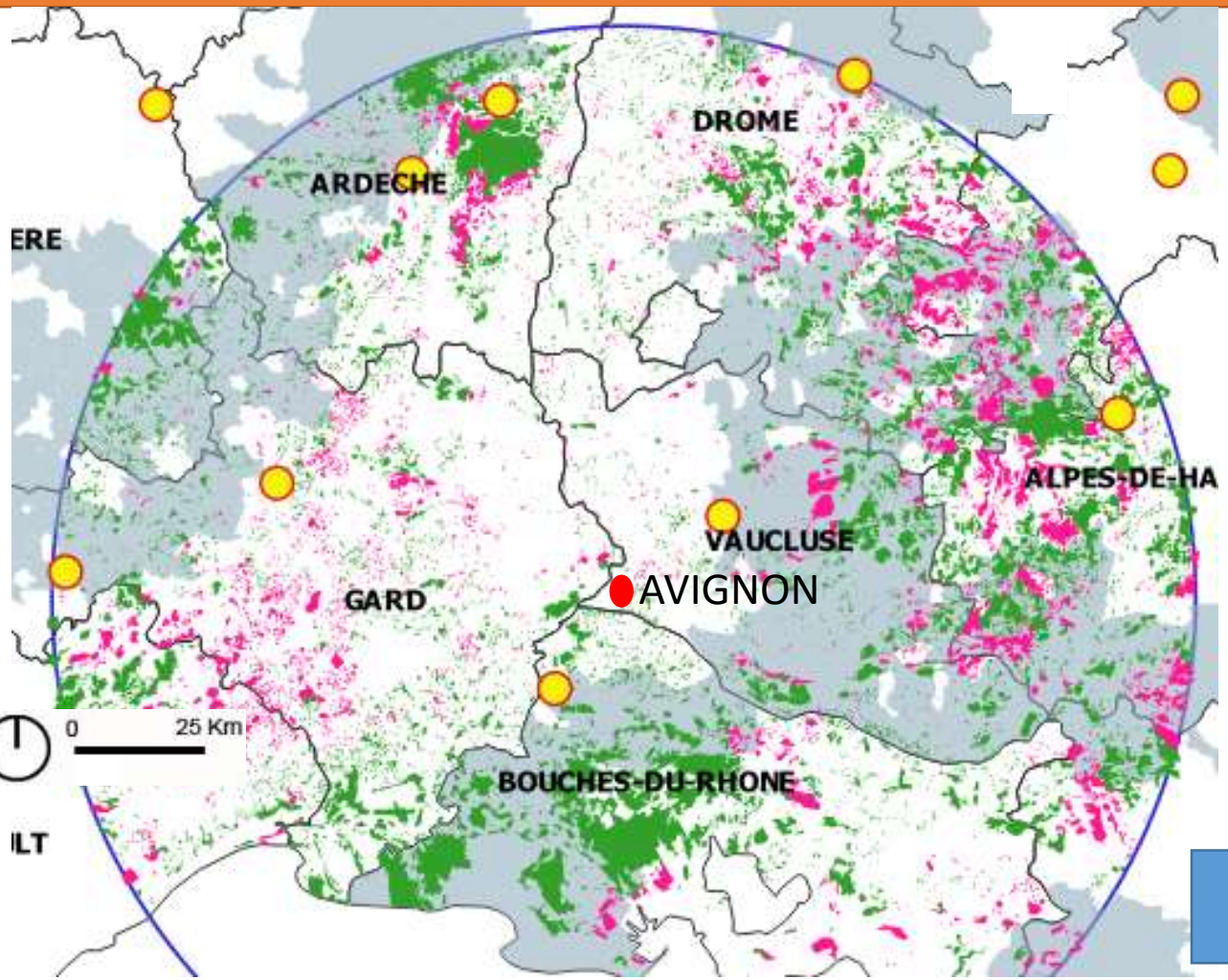
STEP 3 :
OVERLOAD
DATA 1 (scale of the parcel) ON
DATA 2 (scale of the city)

Parcels aggregation



MAP
&&
statistics calculation of variables to define the spatial signature in SSC

Results : Characterization of the form and location of farms contributing to local supply chain (SSC)



Spatial signature in short supply chain (beef production areas)

First variable
Dominance

2* More areas in SSC

Located close to each other

Neighborhood effect
(socials links , best pratices)

Second variable
Distance from Slaughterhouse

Beef feeding areas selling are closer

Cost Distance and butcher

Third Variable
Location with Natural park

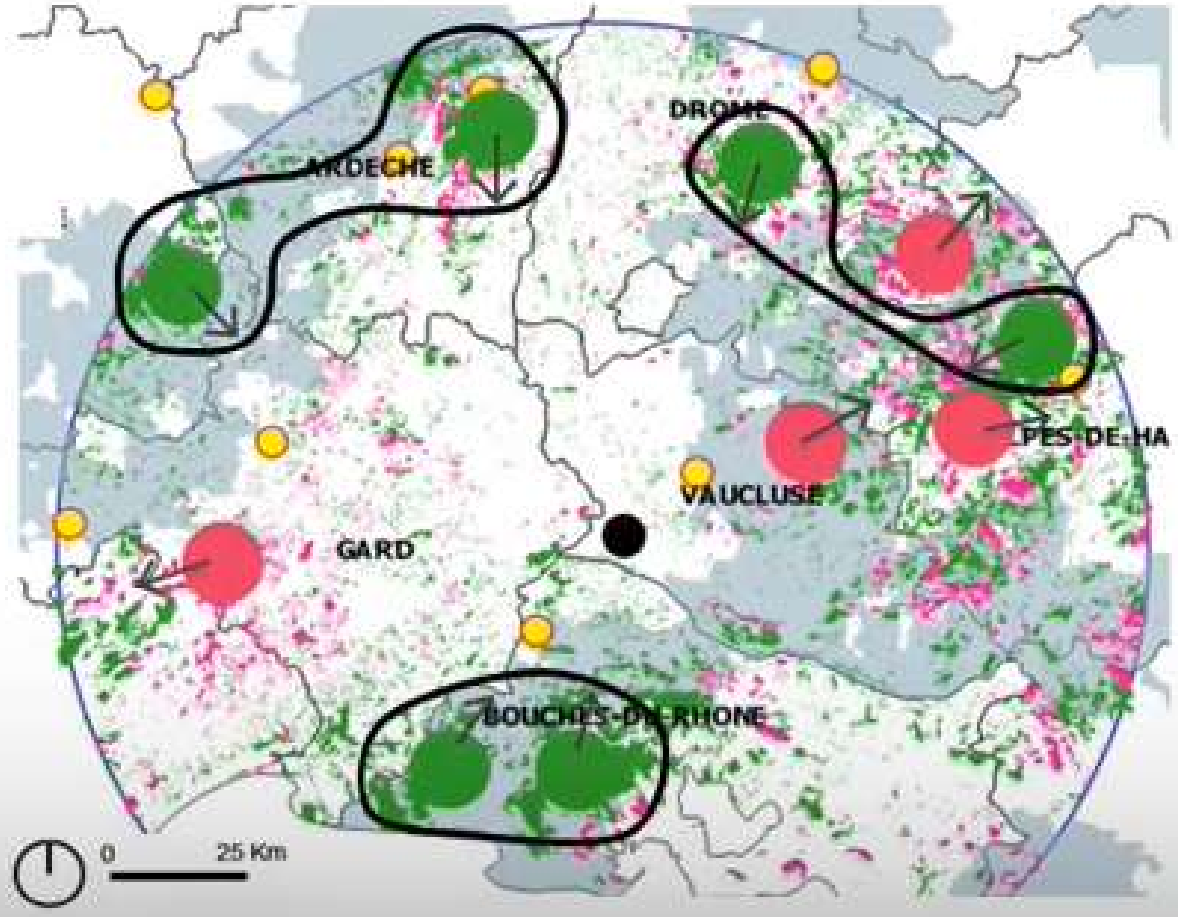
Proportion Areas SSC are higher

Action parks
(local food ,
quality labels)

Publics policies

Fourth Variable
Rugosity

Increased rugosity (Brinkley,Forman) is associated with large populations and large historic peri-urban farms involved in direct marketing.



3. Archipel *foodshed*

Mouléry, Sanz Sanz et al. (2022)

Conclusion

- WHY IT'S IMPORTANT !!! -> These approaches are of great interest to public policy ! due to the lack of method and tools to work on short supply chains -> have a map -> statistics -> general view or point of reference
- **Evaluate the food capacity in a region**
- And to have the possibility to increase local production with actors in the region
- Our methodology -> other research project -> with other type of agriculture
- To go to the field to better understand, meet the farmers (qualitative studies)

Self-sufficiency assessment: Defining the foodshed spatial signature of short beef supply chains

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