Tree & Accomodation In Paris

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Toward and Ecocity

"Human settlement modeled on the self-sustaining resilient structure and function of natural ecosystems"

⇒ Simply put, an eco-city is an **ecologically healthy city**.

The Four Pillars:

- **Urban Design**
  Access by proximity, providing residents with walkable access to open/green spaces, basic urban services, and affordable housing…

- **Bio-Geo-Physical**
  Responsible management of resources and materials and production of clean, renewable energy, ensuring clean air and clean water, healthy soils and locally grown food …

- **Socio-Cultural**
  Access to lifelong education for all and facilitates conditions for vibrant human expression …

- **Ecological**
  Sustaining and Restoring biodiversity of local, regional and global ecosystems, including species diversity, ecosystem diversity, and genetic diversity …

Green areas & Trees improves the quality of life within a community !!!

- **Socially**: offering residents a place for relaxation and interaction,
- **Health**: disease prevention, improving the overall air quality, but also encouraging inhabitants to spend more time outside.

!!! Constant expansion of cities in their surrounding territory (“urban sprawl”) leads to gradually eliminates the natural green spaces and agricultural terrains from our landscape.

⇒ *environment issue : heat islands and heat waves, bad air quality ...*

Ensure an adequate proportion of urban green network

What is the relationship between trees' seniority in the urban landscape and accommodation prices?

HYPOTHESIS:

- Green spaces are a big + for communities :
  - Mental and physical health improvement,
  - Improved air quality,
  - Towards EcoCity.
- Green spaces are more and more scarce

THUS ⇒ Accomodation near green spaces should have higher price because they are more requested!

The richer neighbourhoods of Paris should have more trees.

DataSets :

PARIS | Data

- **Trees** location in Paris

TYPE EMPLACEMENT	DOMANIALITE	ARRONDISSEMENT	COMPLEMENT ADRESSE	NUMERO	LIEU / ADRESSE	IDEMPLACEMENT	LIBELLE FRANCAIS	GENRE	ESPECE	VARIETE OUCULTIVAR	CIRCONFERENCE (cm)	HAUTEUR (m)	STADE DE DEVELOPPEMENT	REMARQUABLE	geo_point_2d
Arbre	Alignement	PARIS 8E ARRDT	NaN	NaN	AVENUE CESAR CAIRE	000101008	Platane	Platanus	x hispanica	NaN	101	15	Adulte	NON	48.87621290437141,2.319334479811411

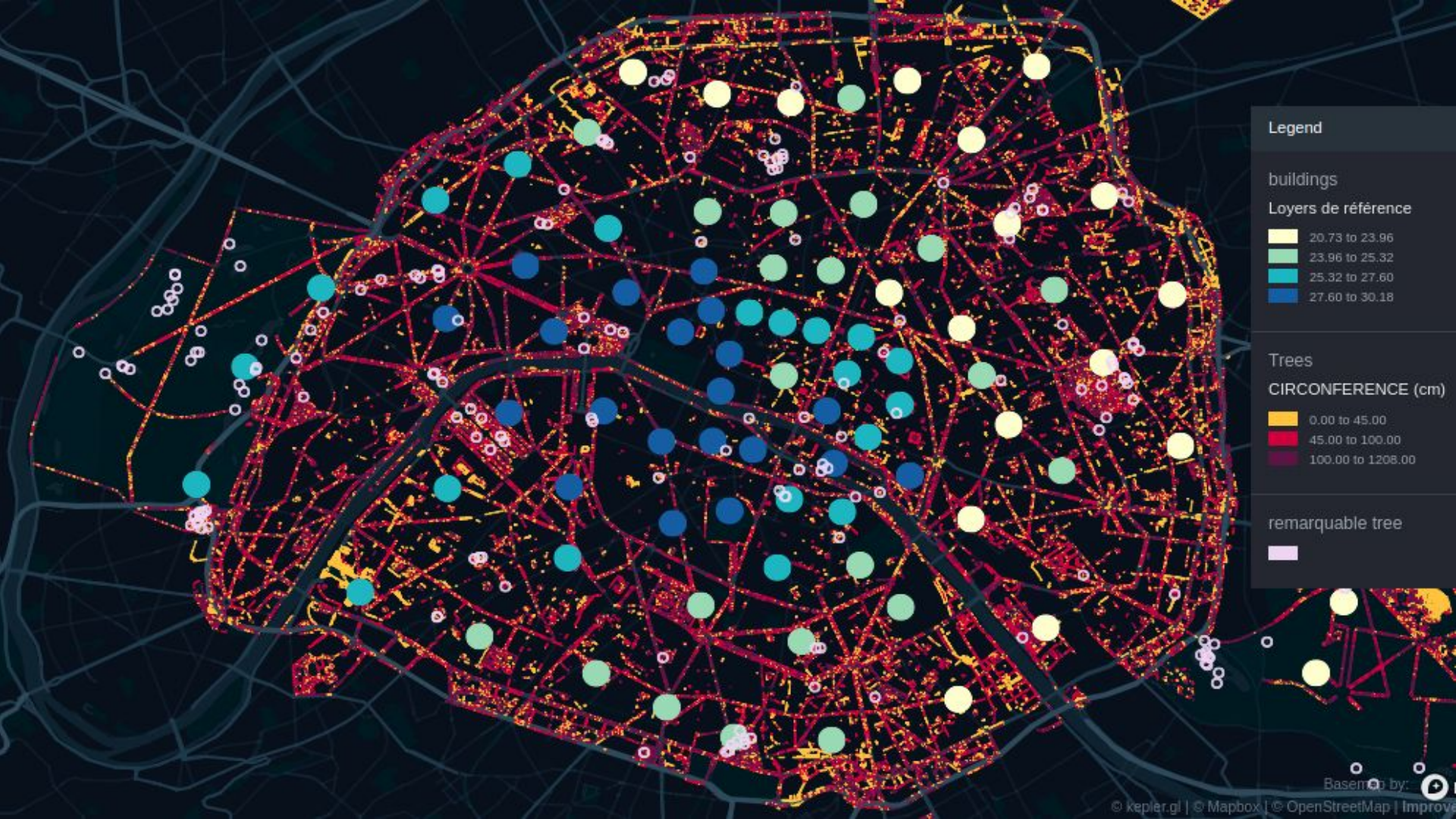
- **Accommodations** and prices

GeoJSON

	Secteurs géographiques	Numéro du quartier	Nom du quartier	Nombre de pièces principales	Epoque de construction	Type de location	Loyers de référence	Loyers de référence majorés	Loyers de référence minorés	Année	Ville	Numéro INSEE du quartier	geo_shape	geo_point_2d
0	13	72	La Chapelle	2	Apres 1990	non meublé	21.0	25.20	14.70	2020	PARIS	7511872	{"coordinates": [[[2.365803615285393, 48.88554...	48.89401216958227,2.3643867790293234
1	13	72	La Chapelle	3	Avant 1946	non meublé	20.4	24.48	14.28	2020	PARIS	7511872	{"coordinates": [[[2.365803615285393, 48.88554...	48.89401216958227,2.3643867790293234
2	14	76	Combat	1	Avant 1946	meublé	28.5	34.20	19.95	2020	PARIS	7511976	{"coordinates": [[[2.388343313526396, 48.88056...	48.878639075724855,2.3801272818292953

Data Analysis:

- Use Kepler.Gl for base map and localisation plotting
  - Kepler's averages data based on zooming (less heavy)
- Couldn’t load GeoJson files using Kepler’s
  - I couldn’t draw polygons in the shape of each district for my analysis so I decided to fall back to large points
- Couldn’t compute number of trees per districts/building price per square
  - Trees dataset doesn’t have the number of the district trees belongs to!
  - Accommodation dataset doesn’t have each accommodation gps location, just the location of its district.
  - Accommodation dataset has been pre-processed and has an equal number of buildings per each district.
- Plot average price per square of buildings per districts


Legend
buildings
Loyers de référence
20.73 to 23.96
23.96 to 25.32
25.32 to 27.60
27.60 to 30.18
Trees
CIRCONFERENCE (cm)
0.00 to 45.00
45.00 to 100.00
100.00 to 1208.00
remarquable tree
Basemap by:
© kepler.gl | © Mapbox | © OpenStreetMap | Improve

Conclusion

- **Richer areas have less trees** *(political values in those area are often centered on capita and less urban development and ecology) and* ***more expensive accommodation prices***
- Historically **poor areas** have **more young & old trees**
- **Gentrification** (historically poor areas that get richer) tend to have **more young trees** *(political values in those area are often centered on society/human equality and urban development, ecology)*
- **Remarquable trees :**
    - In poorer areas are concatenated around parks
    - In richer areas are scattered in the neighborhood

Thank You for your time !

Any questions ?