



Climate Plan – Lyon Metropole

Strengths and weaknesses of the Adaptation Strategy

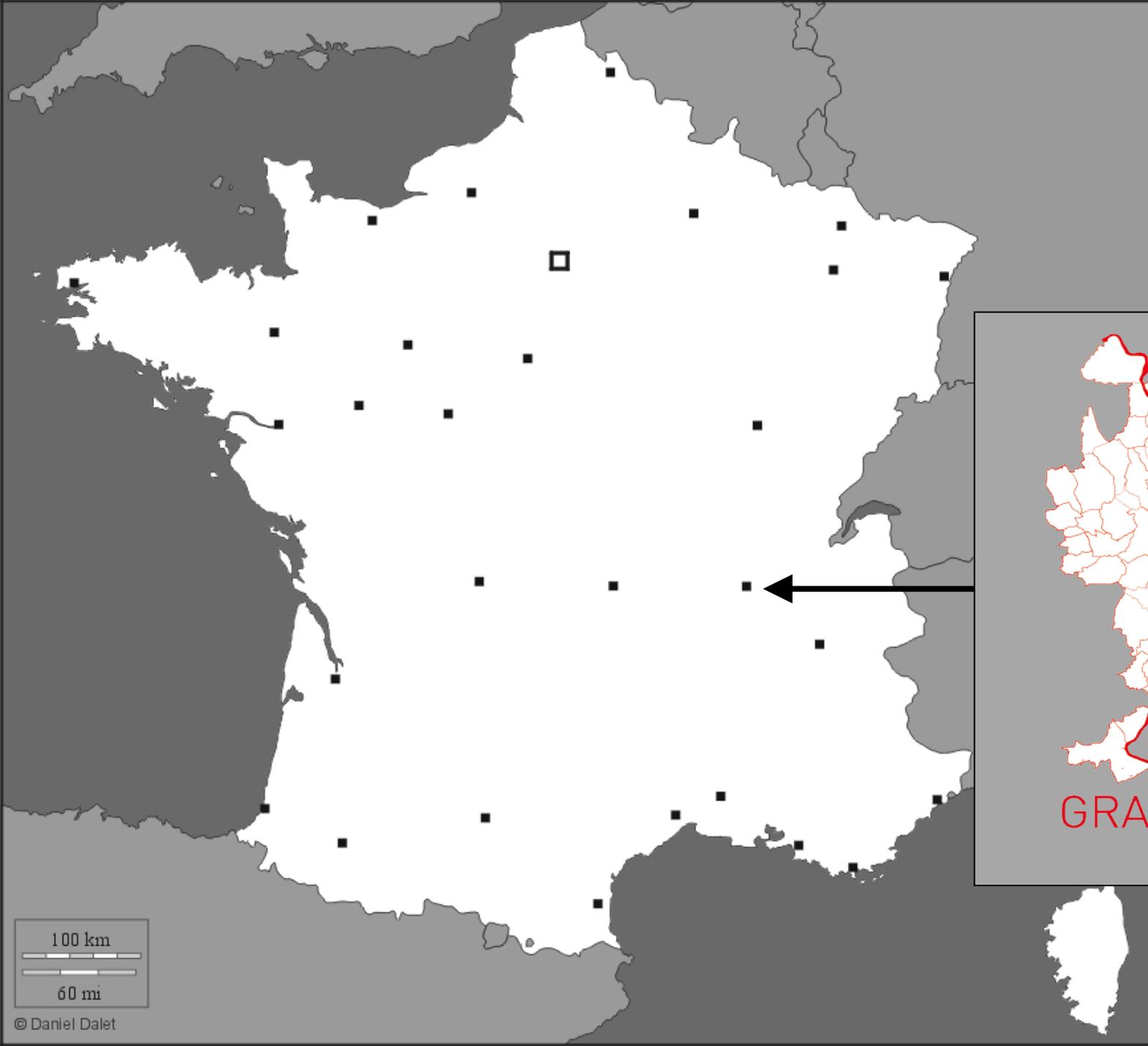
23-24 november 2015

Climate + project



PLAN
CLIMAT
ENERGIE
TERRITORIAL
GRANDLYON

la métropole
GRANDLYON



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la métropole

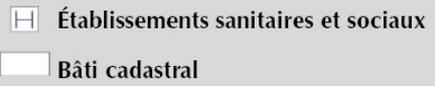
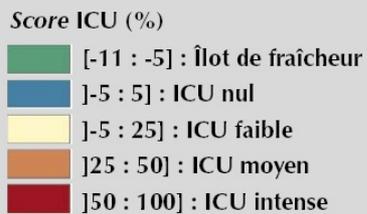


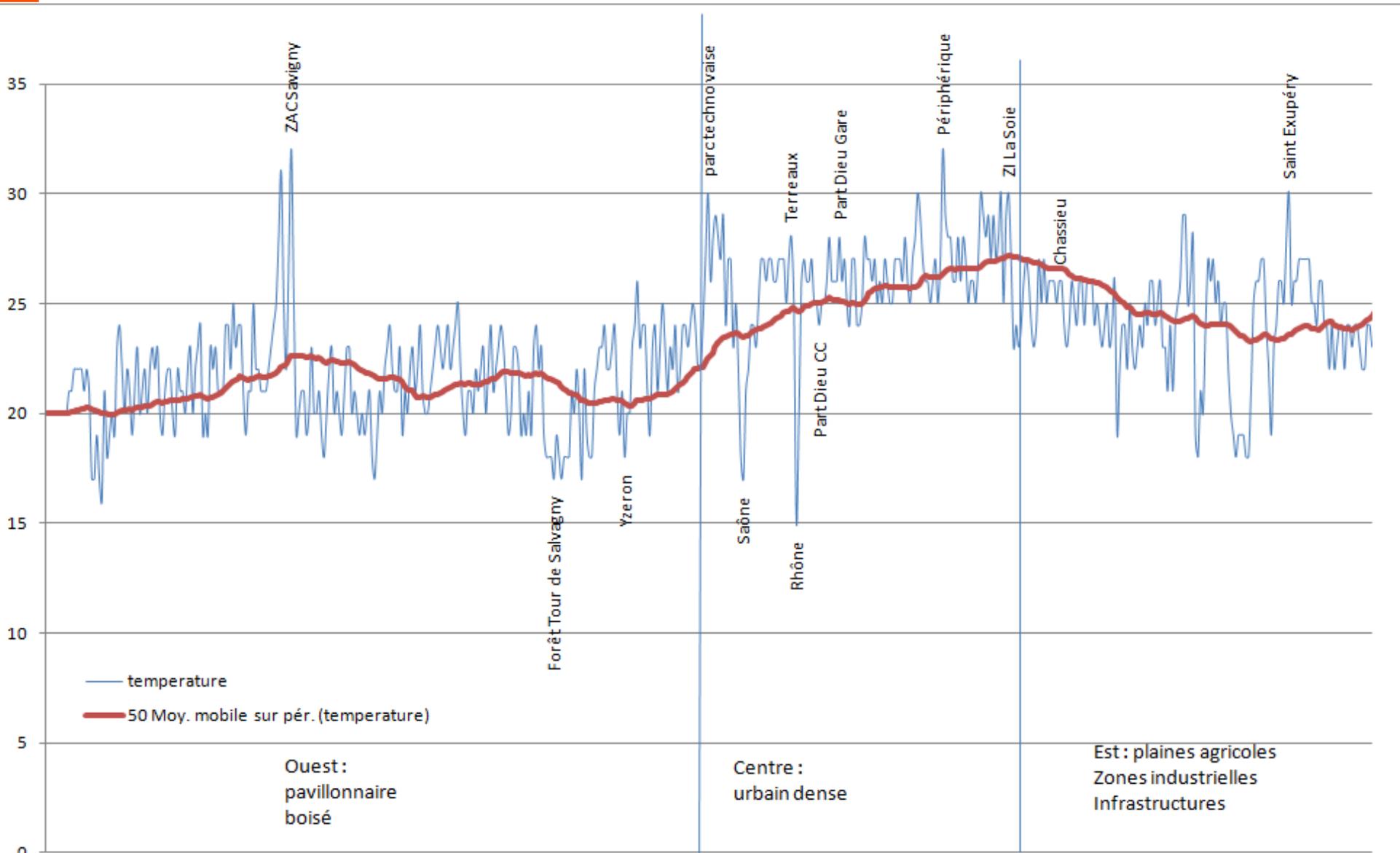


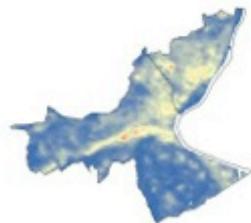
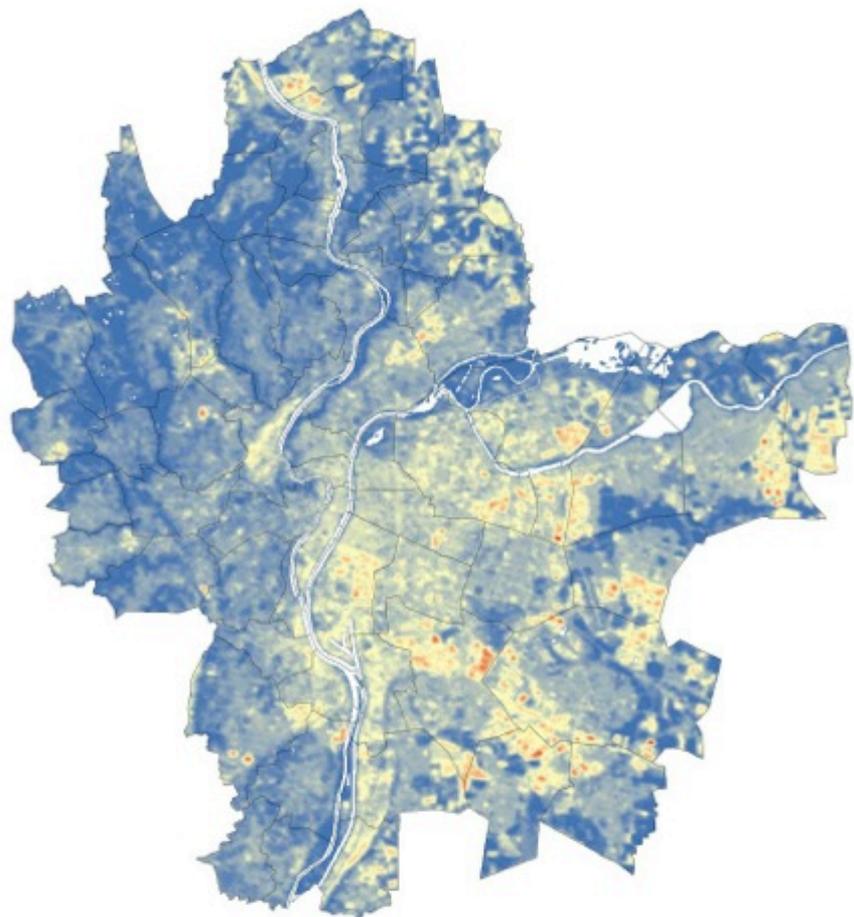


Strength 1 : Heat Island maps

Primary studies (20

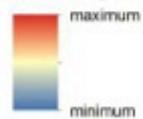






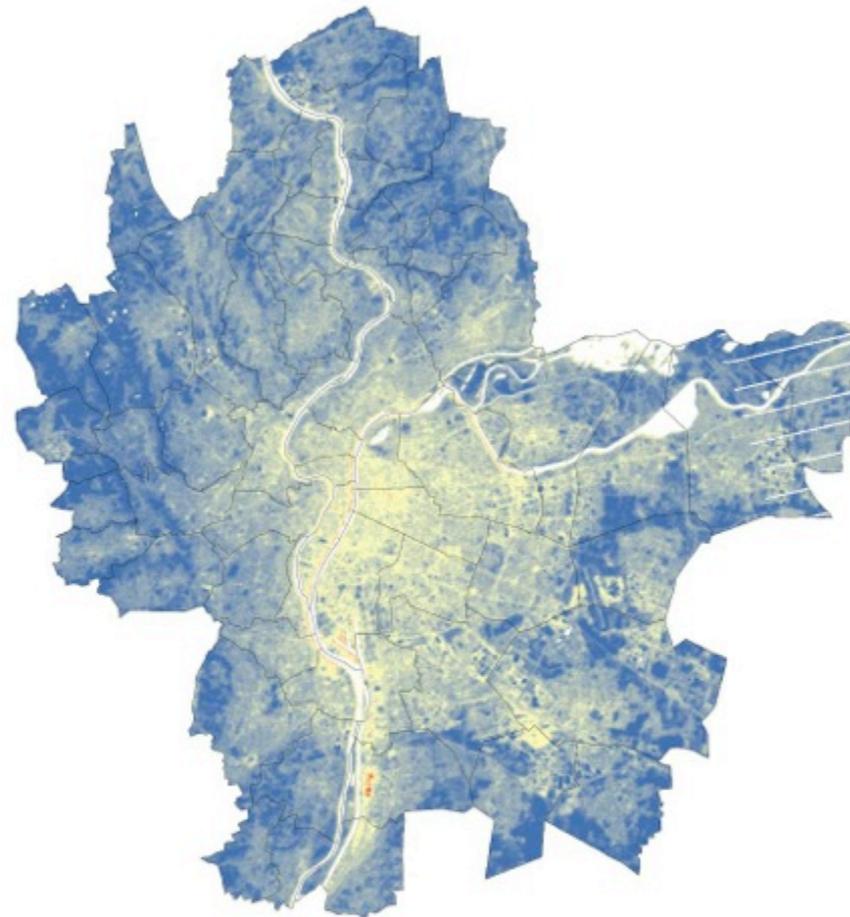
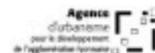
Températures de surface

11 avril 2011 journée



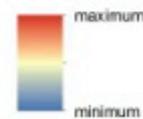
10 Km

Auteurs : Julita Dudek, Marc Lauffer



Températures de surface

30 avril 2011 nuit

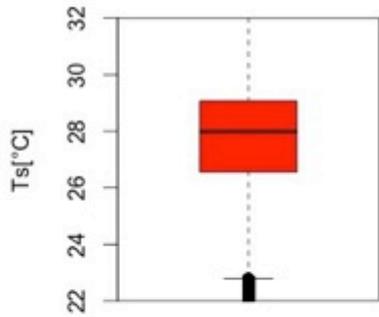


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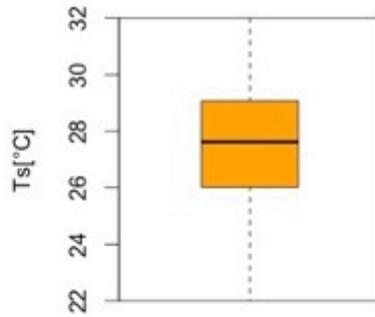
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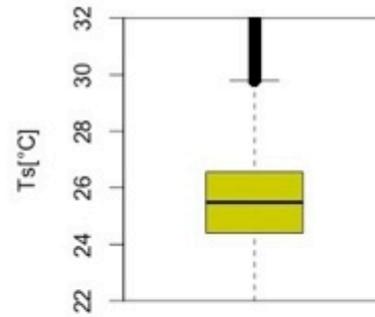
Températures de surface le 11 avril 2011 à 10h



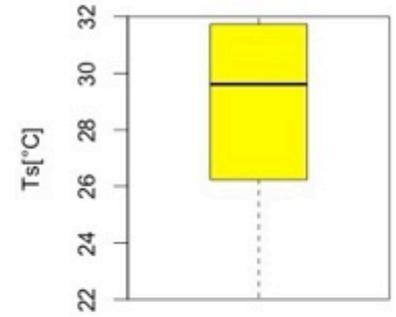
Centre ancien



Immeuble

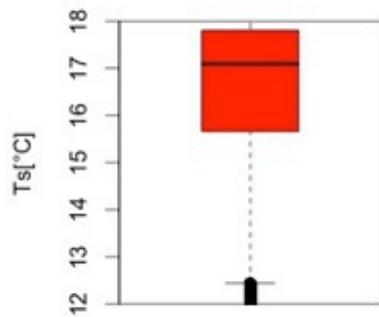


Pavillon

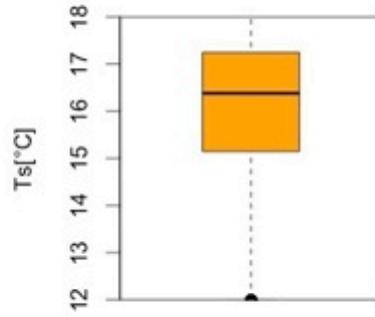


Activités

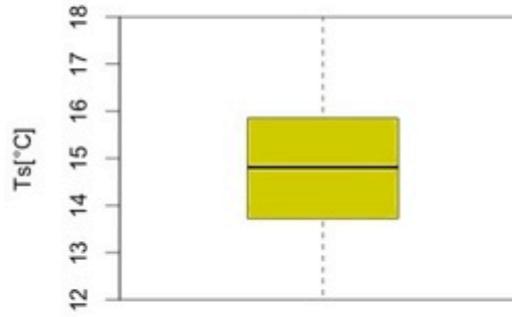
Températures de surface le 30 avril 2011 à 22h



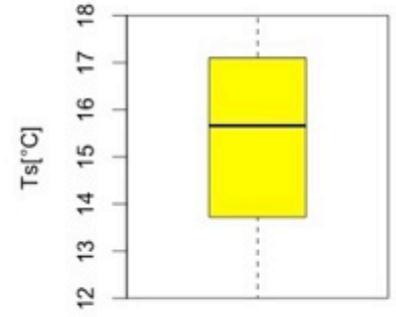
Centre ancien



Immeuble

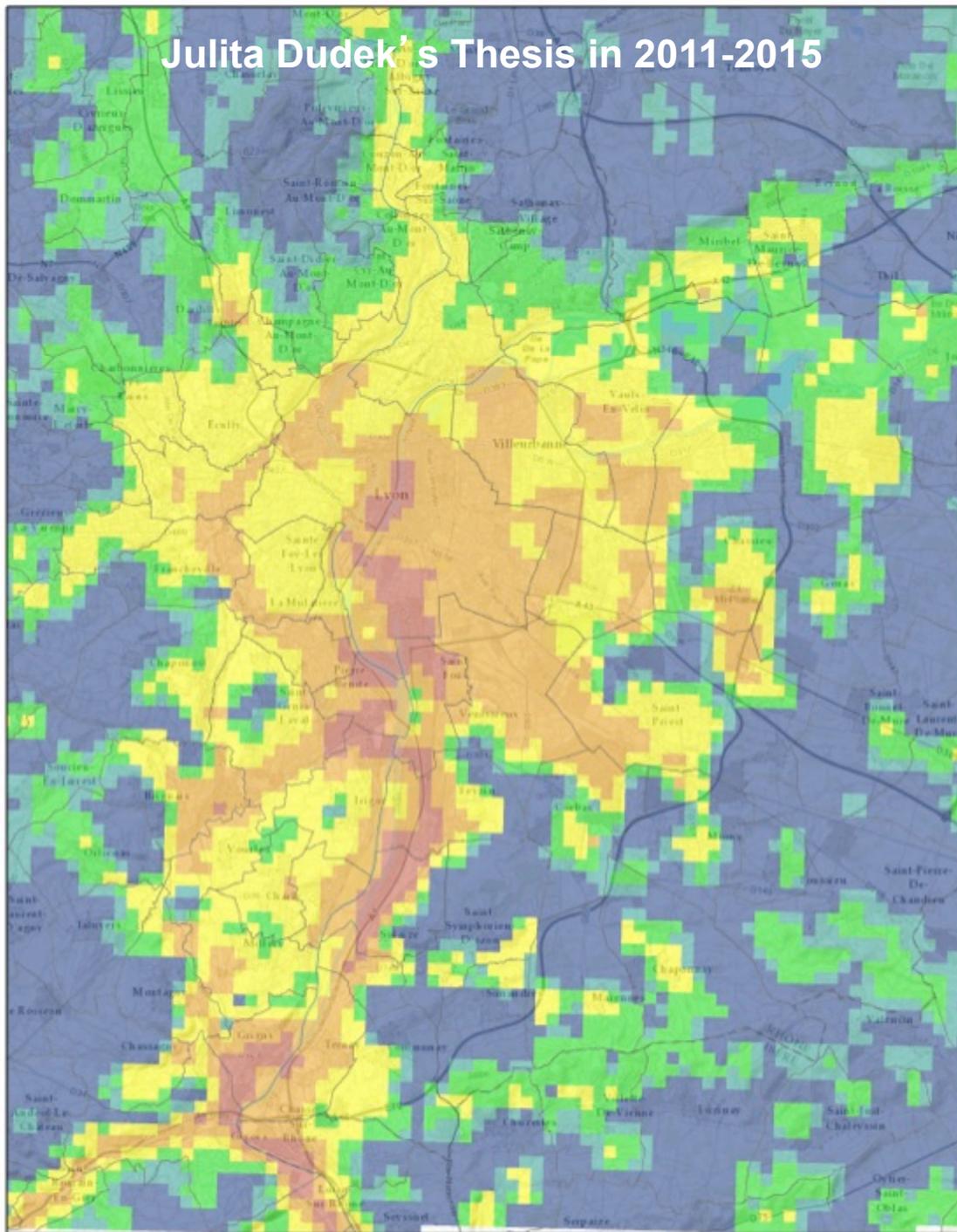


Pavillon



Activités

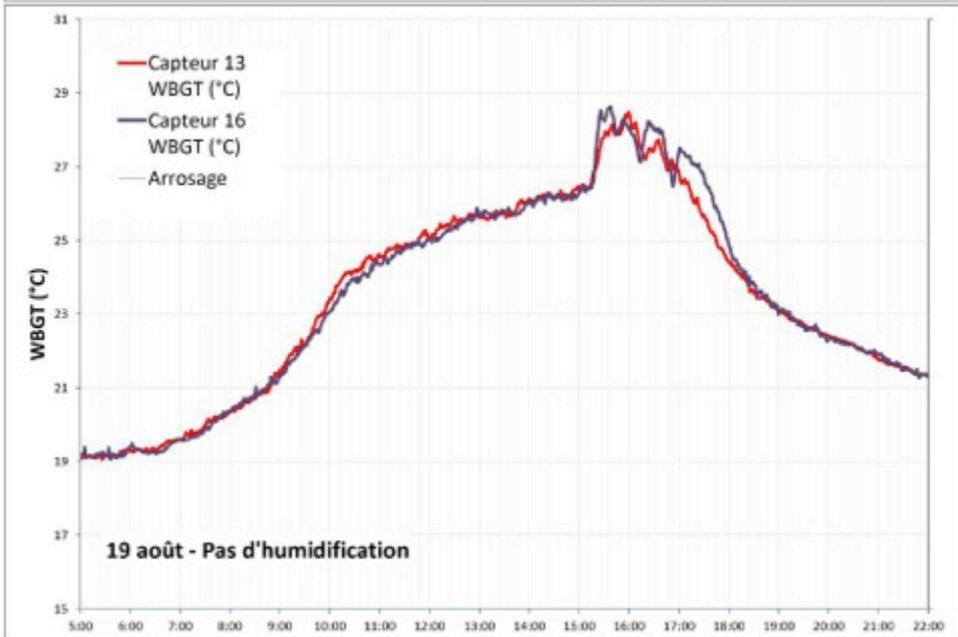
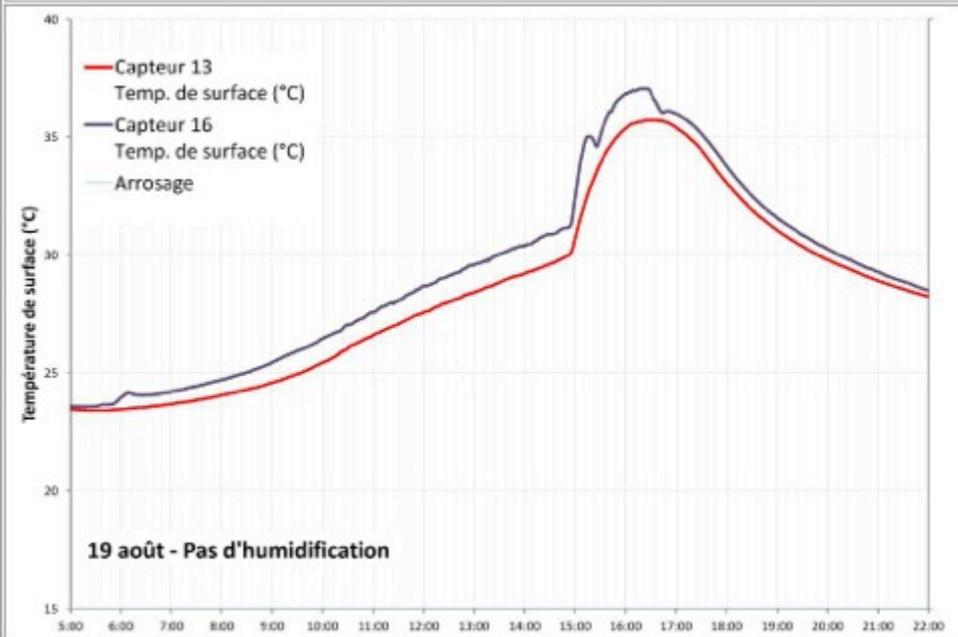
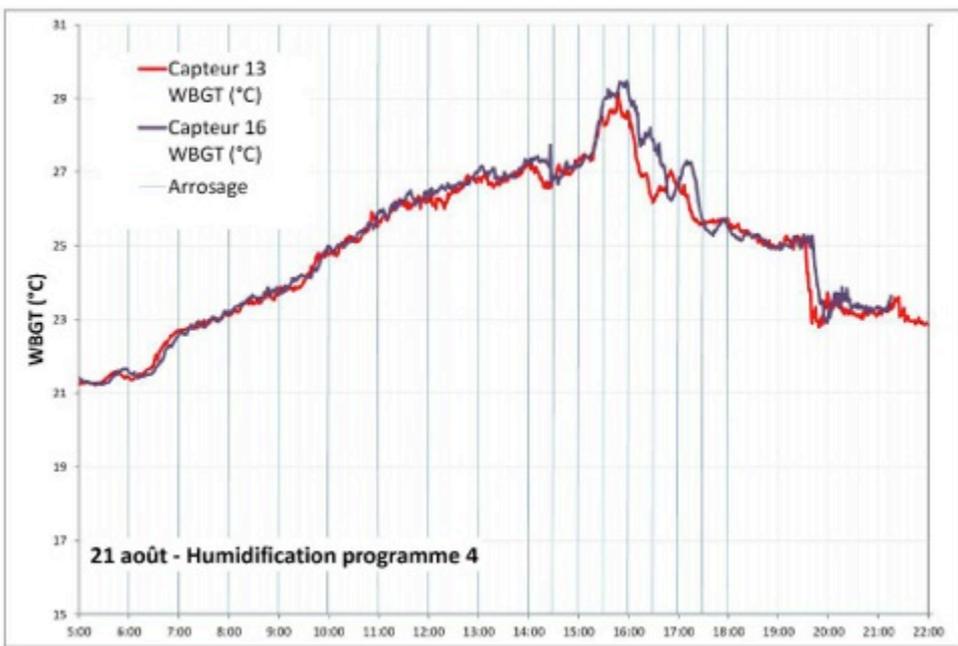
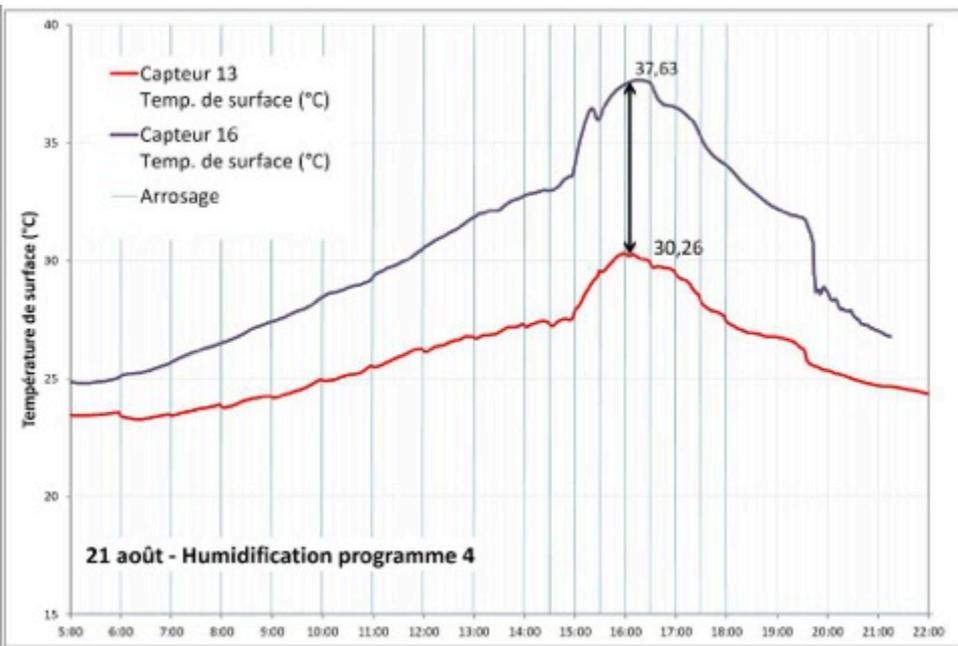
Julita Dudek's Thesis in 2011-2015



la métropole
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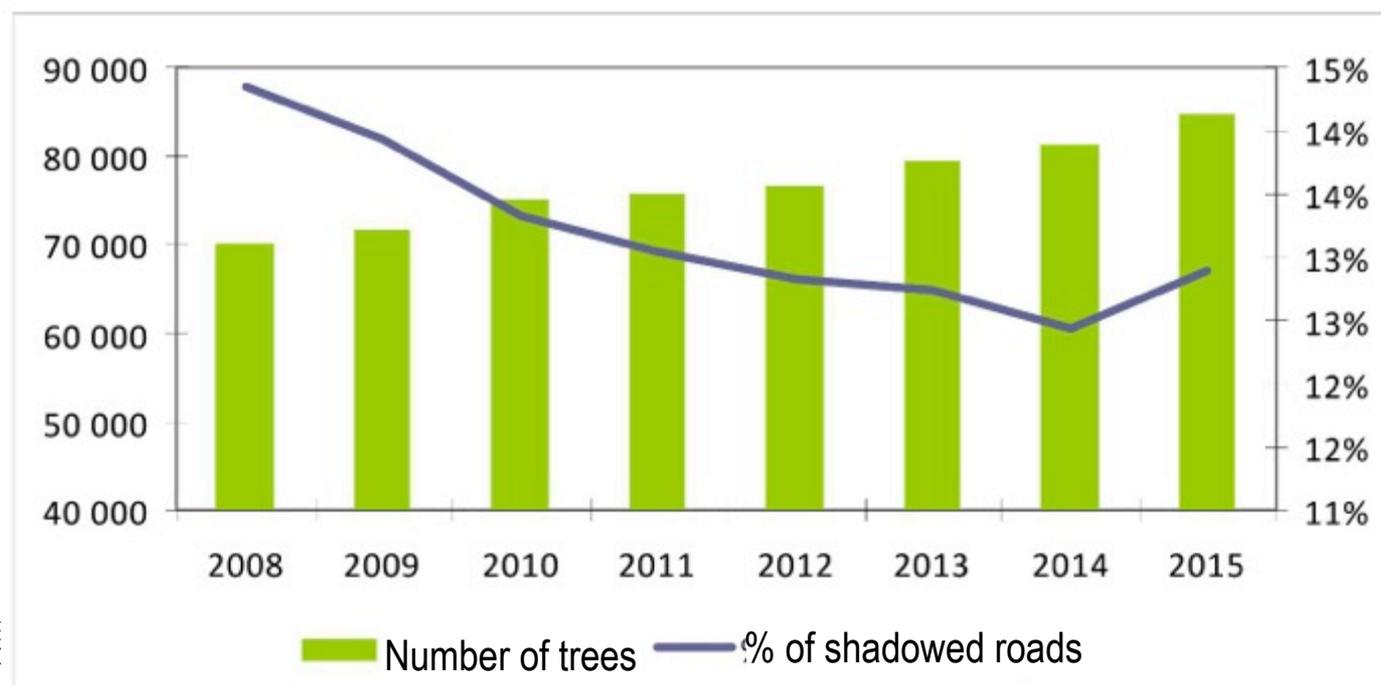
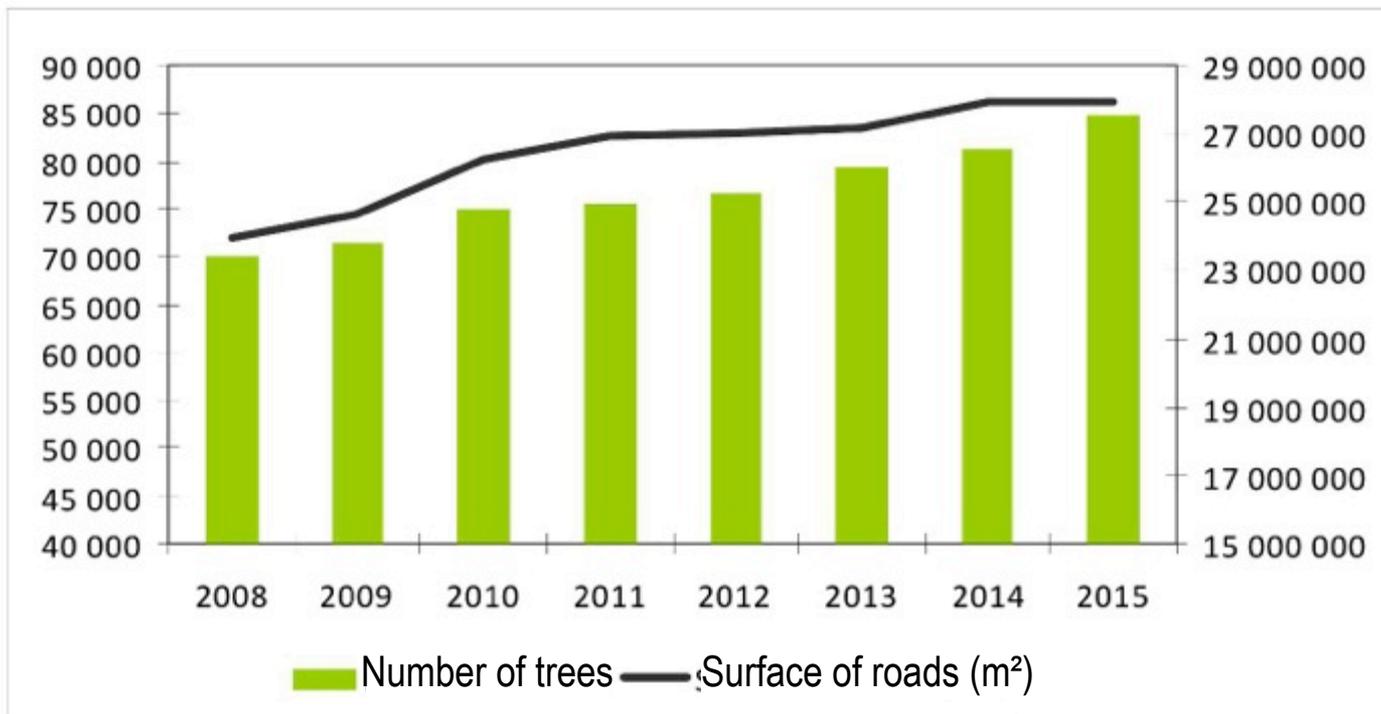
Strength 2 : on-site experimentation





Strength 3 : trees' charter





Strength 4 : rainwater strategy and competence



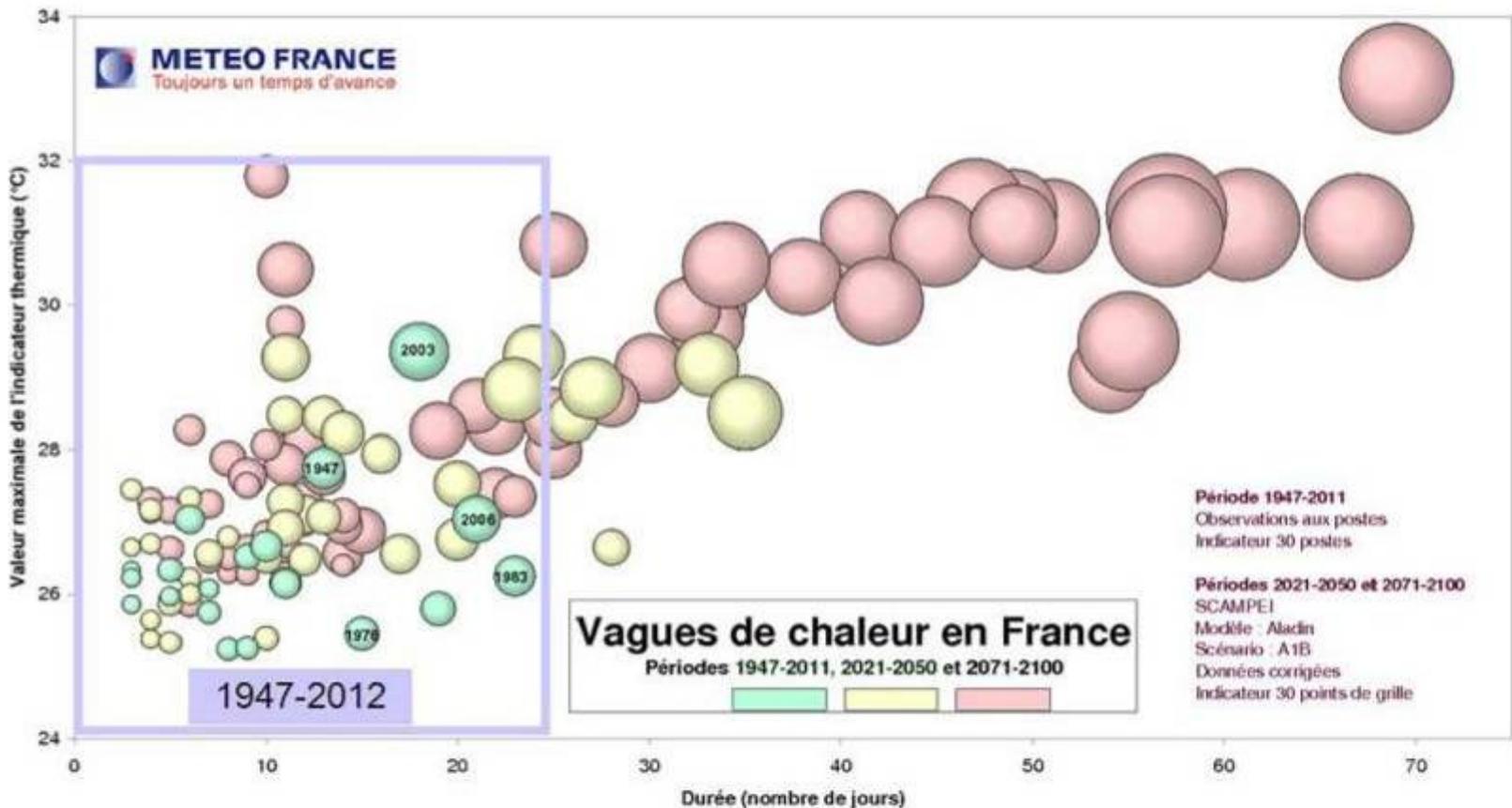
Elisabeth Sibeud, grand lyon

Strength 4 : rainwater strategy and competence



Strength 5 : town services for vulnerable people, heatwave plan

Evolution des vagues de chaleur entre 1947 en 2100 en France



La surface des sphères symbolise l'intensité globale des vagues de chaleur, les sphères les plus grandes correspondant aux vagues de chaleur les plus sévères

Strength 5 : town services for vulnerable people, heatwave plan



Elderly people (allowances, services)



Family (i.e. social workers helping new parents)



Strength or weakness? sensibility of town developers...



Weakness 1 : formalization of the plan (indicators, quantitative objectives, time horizon ?)

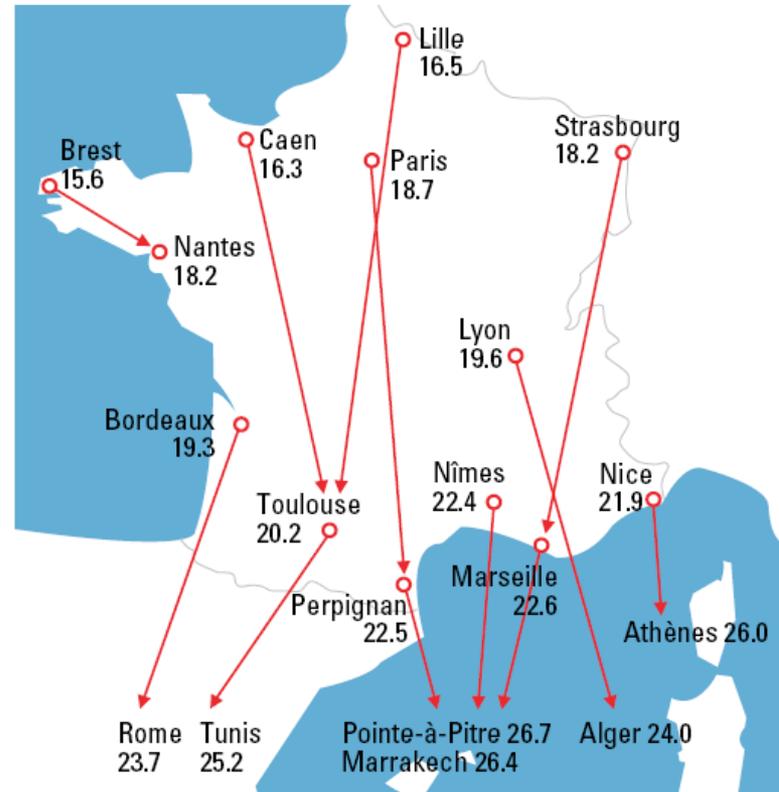


Figure 2 : prévision des températures moyennes à l'horizon 2070-2100. Source : Météo France, 2009.

Weakness 2 : set up « source to sea » governance including economic actors



Rhône

Rhône's debit :

-15 to - 30% on average

- 30 à - 40% in the summer

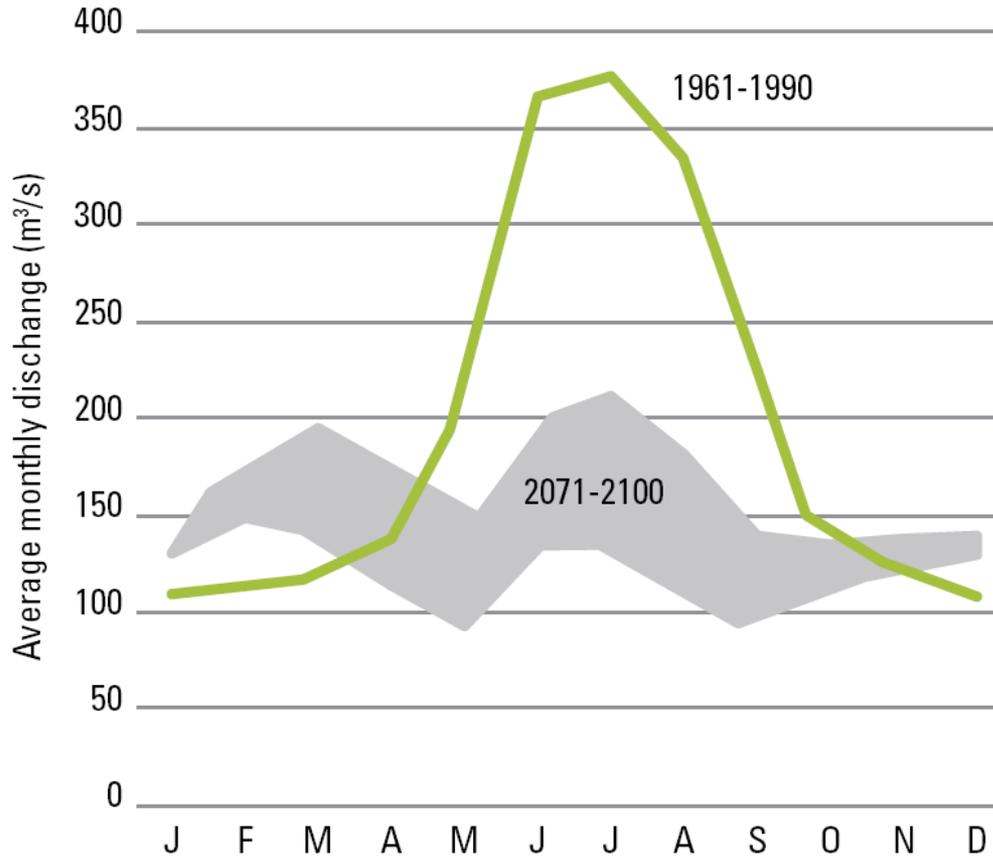


Figure 10 : débits mensuels du Rhône en amont du Lac Léman en climat actuel (1961-1990) et à l'horizon 2080 (2071-2100) selon le scénario A2 du GIEC. La zone grisée représente les incertitudes associées à la projection.

Source : Beniston, 2012.



Weakness 2 : set up « source to sea » governance including economic actors

The central map illustrates the Rhône river basin, a key water source for the region. It highlights the flow from the Alps (Lac Léman) down to the Mediterranean Sea. Key cities and tributaries are labeled, including Mâcon, Lyon, Valence, Avignon, Arles, Nîmes, Gard, Durance, Verdon, Grenoble, Annecy, Genève, Sion, and Lausanne. The map is annotated with several images: a nuclear power plant (top left), a factory producing yellow plastic bottles (top right), an aerial view of a river bend (middle right), and a field with irrigation sprinklers (bottom right). A box with three dots is located at the bottom left of the map area.

Weakness 3 : who will care for « nature in the city » ?



Areas to reinforce

Uncertainty about the health impact (other than heat waves) :

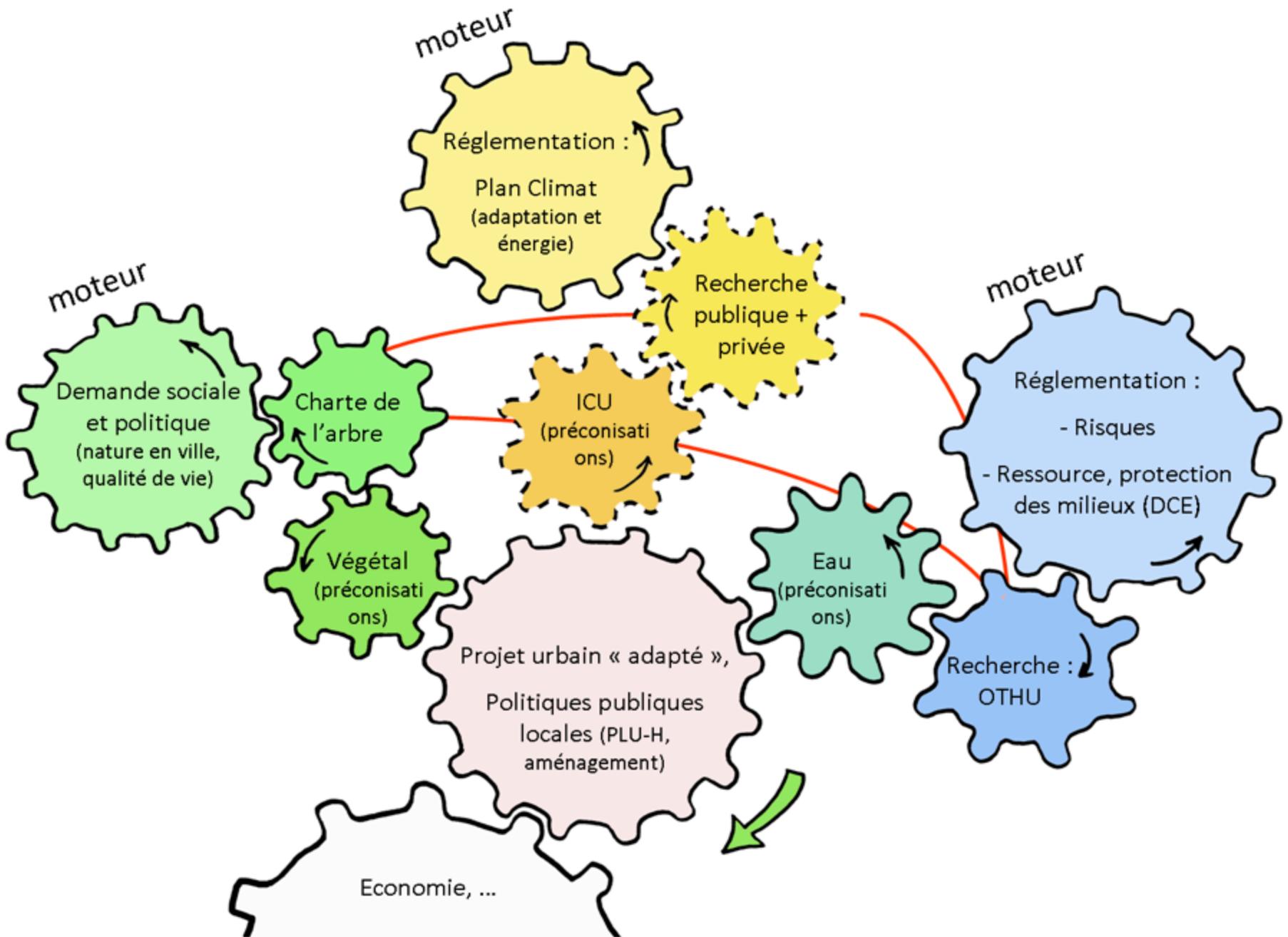
- interaction with pollution
- new diseases



Thank you for your attention !

Contact :

lponsar@grandlyon.com



Number of « heatwave » days

Canicules en jours de forte chaleur à Lyon (nb jours/ an)

