

Analyzing media discourses on urban river bathing to anticipate drowning in the Grand Lyon area

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INTRODUCTION

Urban riverbanks have become increasingly frequented, as major urban regeneration projects were conducted (Romain, 2010). These spaces are now the support of many recreational activities for citizens, like bathing in the river. However, this paves the way for a greater risk of drowning in rivers (Maghakian *et al.*, 2024). Global warming could increase this risk (Fralick *et al.*, 2013). It is therefore significant to identify factors of different nature (e.g. climatic, economic, political and social) that would favor bathing in urban rivers and consequently trigger drowning risk, through the analysis of media discourses.

Can media be a relevant source of information to understand the phenomenon of bathing in urban rivers, and anticipate drownings?

Local media, from Lyon, highlight the risks people face when bathing in the Rhône and the Saône rivers, especially drowning. Projects for recreating bathing spots in both rivers are broadly reported, often as a way to resist heat waves. They describe bathing as an athletic activity, demanding good physical condition, or as a recreational and playful activity, done by children or families, especially during vacations or weekends. On the other hand, French national media are mostly focused on water quality, in the context of the 2024 Paris Olympic Games and their controverted competitions in the Seine river.

	Source	Constitution	Analysis and tools
Corpus of articles (710 articles)	Articles from newspapers, news websites and magazines, at a metropolitan scale (Lyon) and a national scale (France). Extracted from media online archives or Europresse database)	Automatic constitution of the corpus, with keywords, then manual selection. Dates: 2007 – 2024	Content analysis (R Studio) Lexicometric analysis (Iramuteq)
Google requests data	Use of Google Trend https://trends.google.fr/trends	Extraction of the relative rate of requests of the expression « baignade lyon » (bathing in Lyon) per week.	Quantitative analysis (R Studio)
Drowning data	Firefighters and rescuers data (SDMIS, Service départemental et métropolitain d'incendie et de secours)	Database formed by Maghakian <i>et al.</i> (2024)	Quantitative analysis (R Studio)

Table 1: Data used analyses performed

TEMPORAL PATTERNS OF MEDIA RECORDS

What are the long-term trends of media interest in « bathing in urban rivers » ?

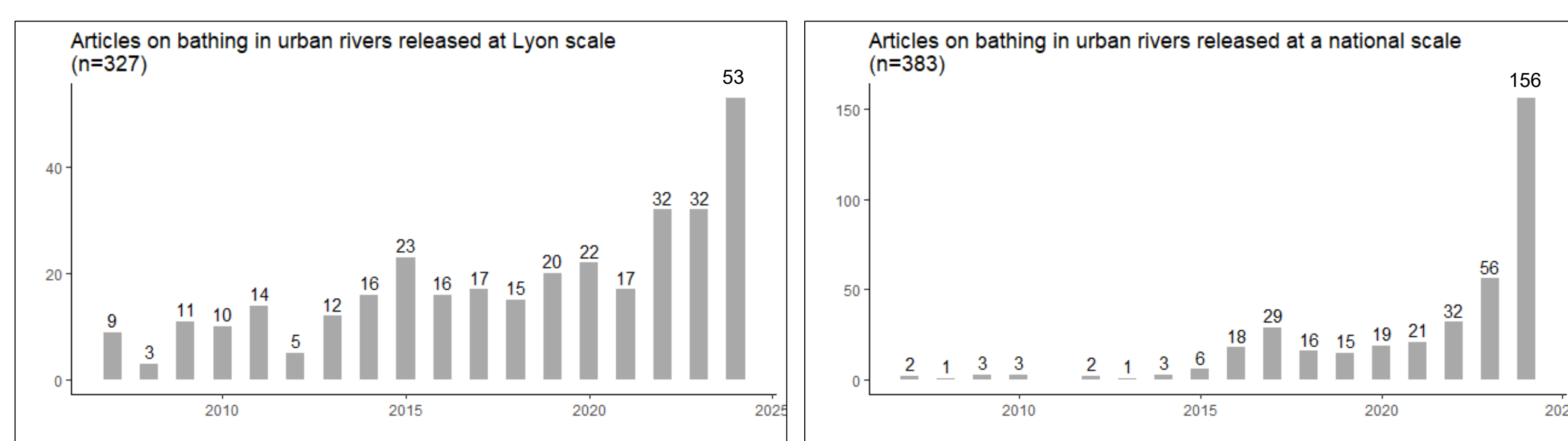


Figure 1: Publication of articles on bathing in urban rivers between 2007 and 2024

Do media records on bathing and drowning follow seasonal patterns?

Evolution of the Google requests of the expression "Baignade Lyon" and of the number of articles from local media dealing with drowning in the Rhône and Saône rivers (2021 - 2023)

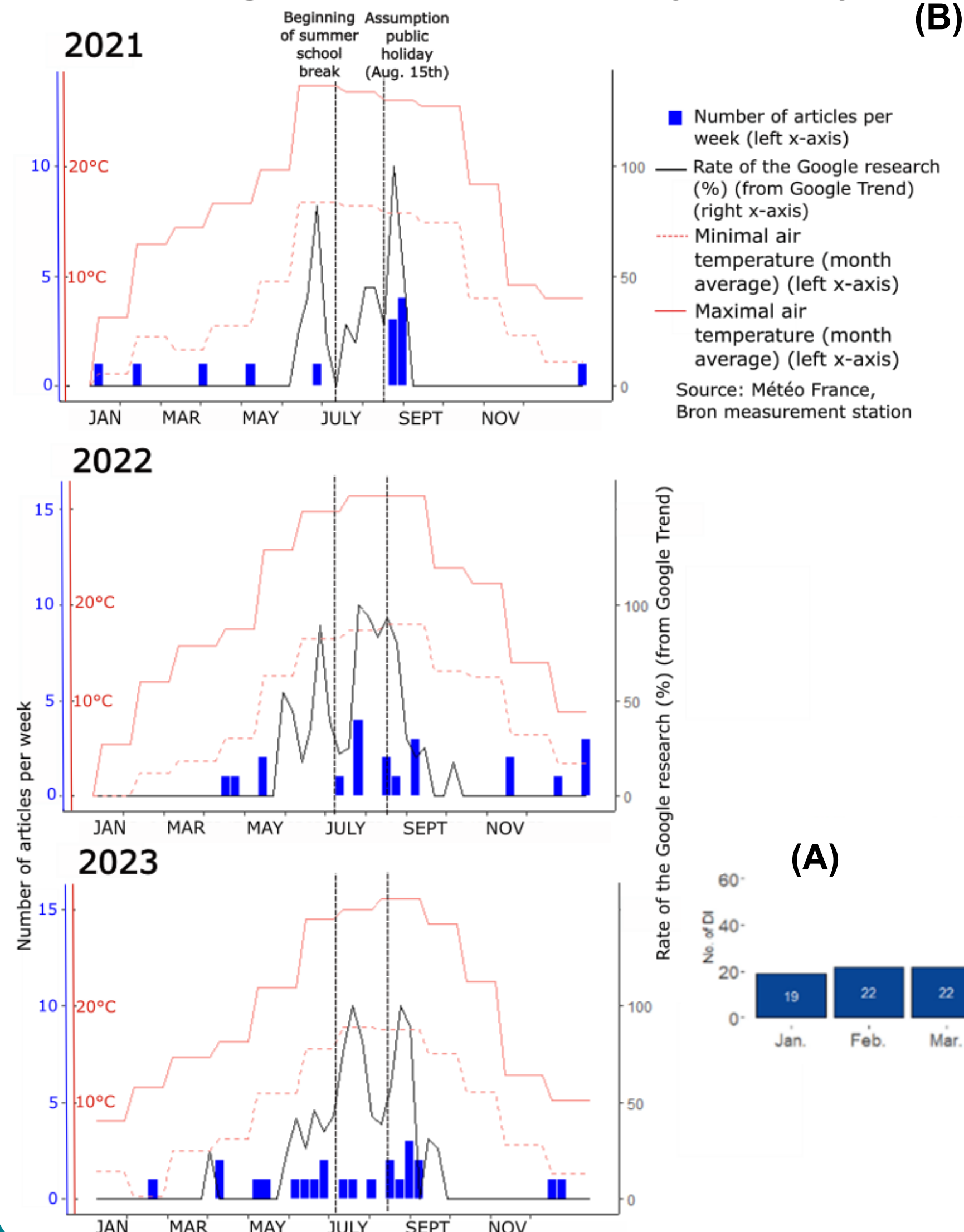


Figure 2: Monthly patterns of drowning and bathing in Lyon. (A) Number of drowning incidents per month between 2015 and 2021 (Maghakian *et al.*, 2024). (B) Mediatic records (Google research, news articles) about bathing and drowning in Lyon, during 3 summer periods (2021 – 2023)

SPATIAL PATTERNS OF BATHING AND DROWNING IN LYON

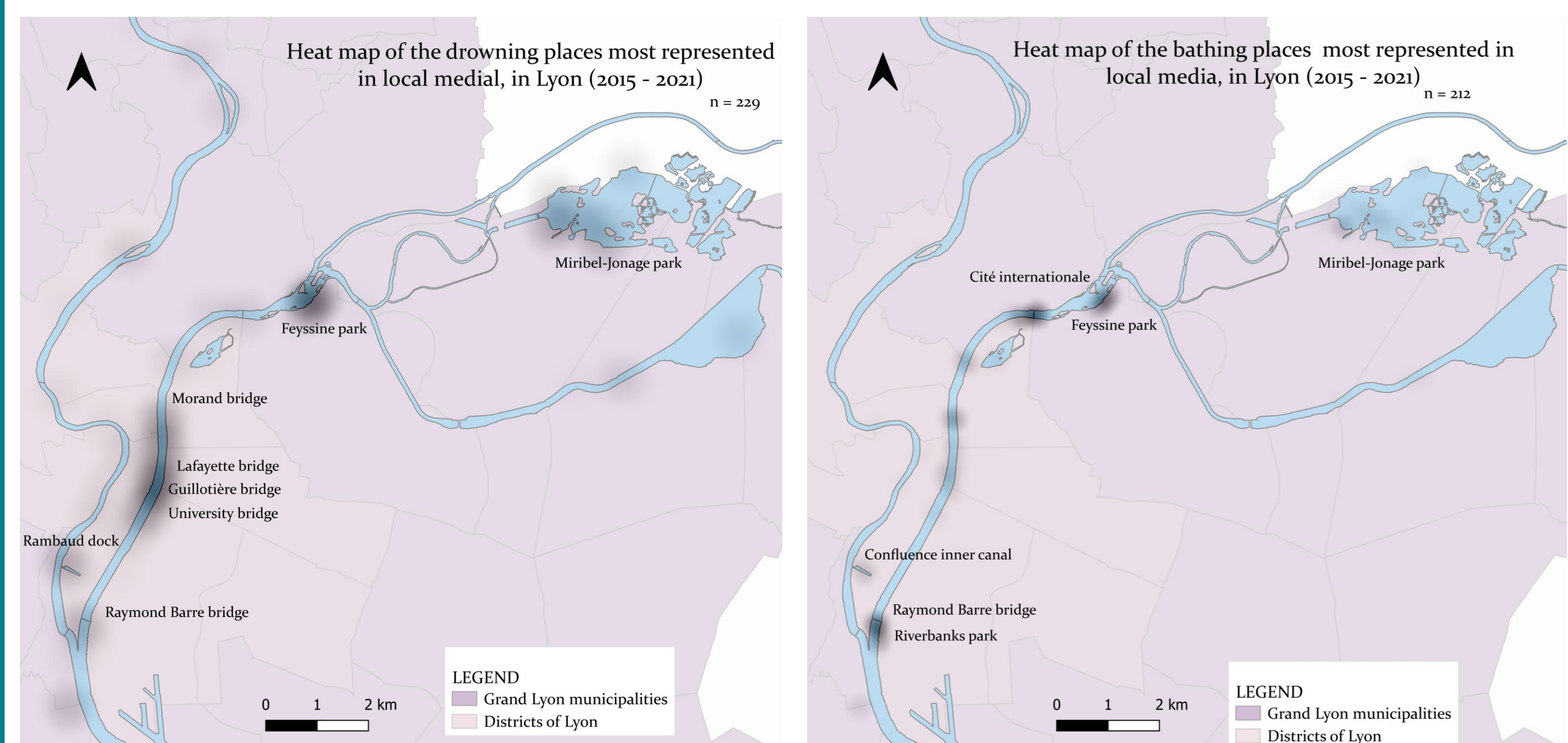


Figure 3: Heat maps of bathing and drowning places in Lyon most dealt with in local media (2015 – 2021)

Can media-based data accurately represent reality? Cross-validation with alternative data sources is key.

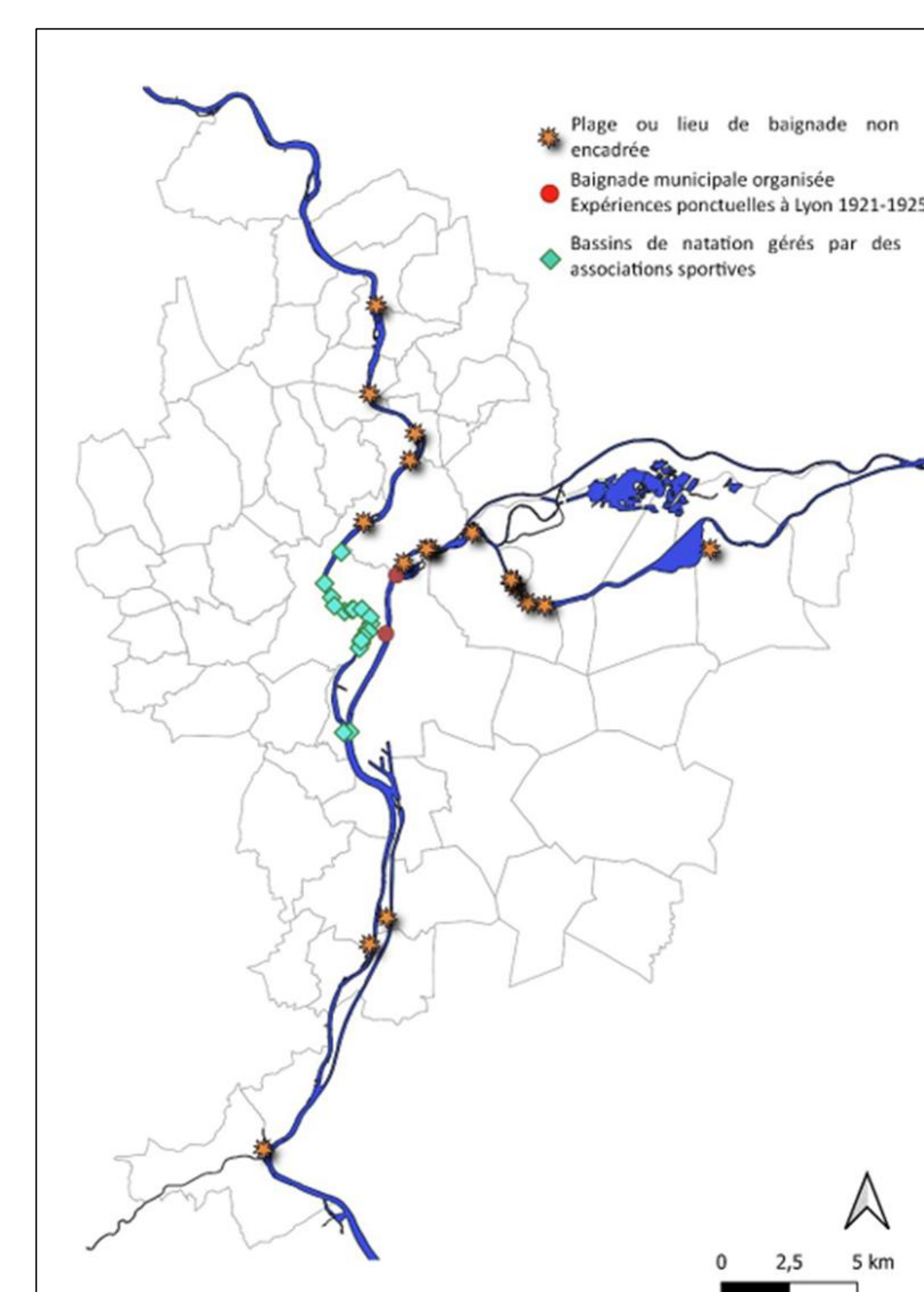


Fig 4: Beaches and bathing places documented during the 20th century in today's Grand Lyon area. Haouari and Delavenne, 2023.

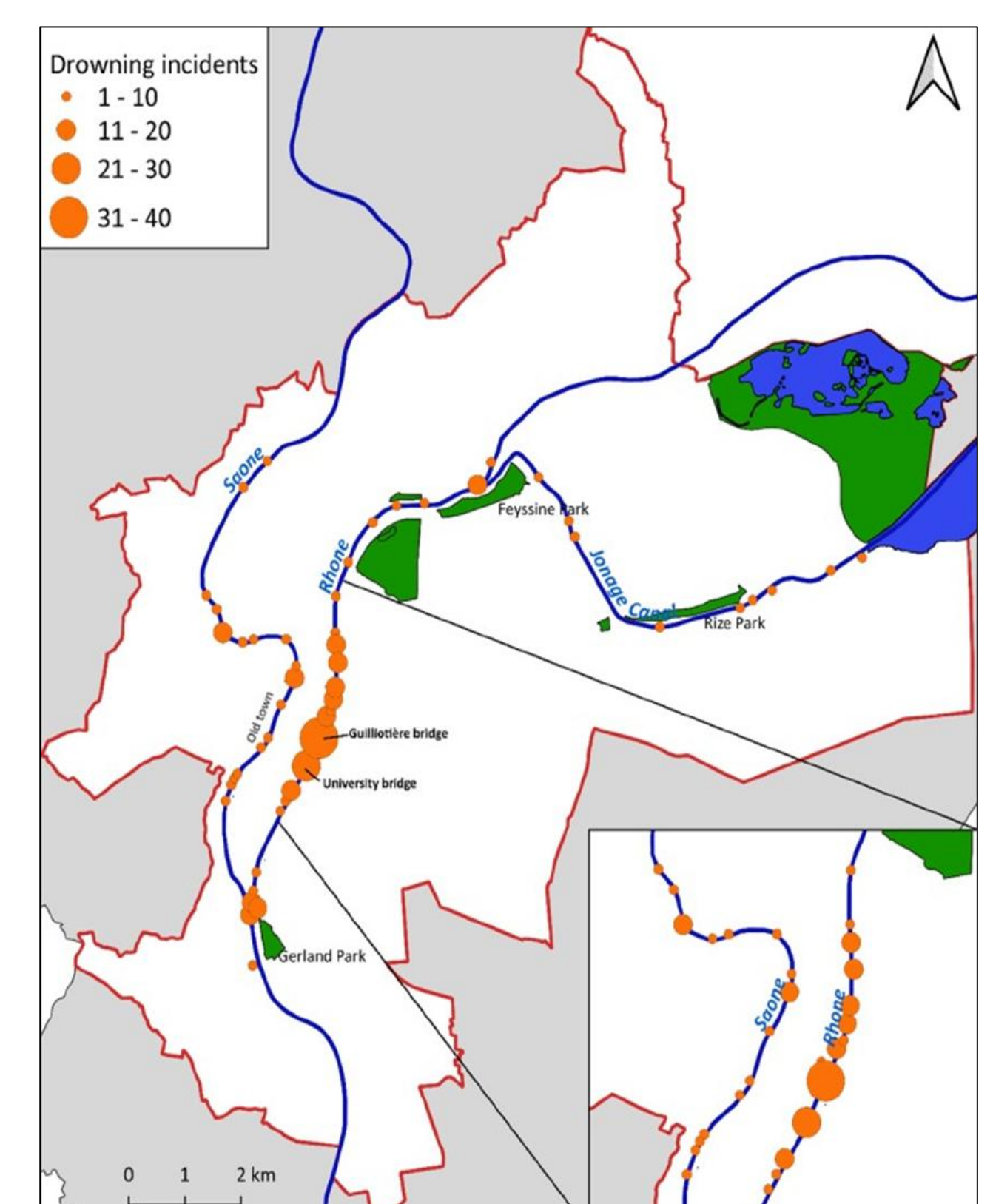


Fig 5: Drowning places in the Grand Lyon, from rescuers data (2015 – 2021). Maghakian *et al.*, 2024

Media data are valuable for analyzing bathing and drowning in urban rivers – as a first step before fieldwork

Media proved to be useful to offer some insights on widespread representations of urban bathing and can provide data on bathing practices and drowning risk in our case study. To continue this work, we plan to do some field study in Lyon, to produce observations of bathing practices in the Rhône and the Saône rivers.

Media also showed that they were an interesting proxy for reality, if cross-validation with alternative data sources is possible. Consequently, they can be used to expand the study to other cities which don't have database on drowning incidents or bathing practices.

REFERENCES

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