

Exploring Urban River Bathing: Case Studies from Multiple European Cities

Exploration de la baignade en rivière en milieu urbain : études de cas dans plusieurs villes européennes

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RÉSUMÉ

Historiquement, les baignades en rivière faisaient partie intégrante de la vie quotidienne, mais l'industrialisation, la pollution et l'apparition de piscines artificielles ont conduit à leur interdiction dans les grandes villes européennes au cours du 20^e siècle. Récemment, un mouvement de renaissance est apparu dans diverses communautés d'Europe. Reconnaissant que la baignade dans les rivières urbaines est un sujet intrinsèquement interdisciplinaire, le studio « Baignades Urbaines » du LabEx IMU de l'Université de Lyon regroupant chercheurs et praticiens a adopté des approches à la fois interdisciplinaires et transdisciplinaires pour étudier ce phénomène à travers des cas européens en 2024. Un travail de terrain approfondi au cours de l'été 2024 dans des villes européennes connues pour leurs sites de baignade fluviale traditionnels/pionniers - Genève, Berne, Bâle, Zurich (Suisse), Amsterdam (Pays-Bas), Copenhague (Danemark), Berlin (Allemagne), Paris (France) et Vienne (Autriche) - a permis des entretiens avec 25 parties prenantes, notamment des agences environnementales, des responsables du tourisme, des gestionnaires de rivières, des sauveteurs, des chercheurs et des ONG. S'appuyant sur ces données empiriques, cette présentation explorera la baignade en milieu urbain en Europe, en mettant l'accent sur les points suivants : (1) le contexte historique et le mouvement populaire actuel pour réclamer le droit de nager/se baigner dans les rivières urbaines ; (2) une typologie des sites de baignade en rivière urbaine ; et (3) les défis de gestion actuels, notamment la qualité microbienne de l'eau et les stratégies de sécurité pour la prévention des noyades. Cette étude met en lumière l'évolution de la pratique des bains de rivière urbains, sa signification culturelle, les typologies de conception et les défis de gestion dans des villes européennes.

ABSTRACT

Historically, river bathing was integral to daily life, but industrialization, pollution, and the rise of artificial pools led to bans in major European cities during the 20th century. Recently, a revival movement has emerged across various communities in Europe. Recognizing urban river bathing as an inherently interdisciplinary topic, the “Baignades Urbaines” studio at LabEx IMU, University of Lyon, has adopted both interdisciplinary and transdisciplinary approaches to study this phenomenon through European cases in 2024. An extensive fieldwork in the summer of 2024 across European cities known for their traditional/pioneering urban river bathing sites—Geneva, Bern, Basel, Zurich (Switzerland), Amsterdam (Netherlands), Copenhagen (Denmark), Berlin (Germany), Paris (France), and Vienna (Austria)—allowed engaging with 25 stakeholders, including environmental agencies, tourism officials, river managers, lifeguards, researchers, and NGOs. Drawing on these empirical insights, this presentation will explore urban river bathing in Europe, with a focus on: (1) the historical context and today's grassroots movement for reclaiming the right to swim/bathe in urban rivers; (2) a typology of urban river bathing site designs; and (3) current management challenges, including microbial water quality and safety strategies for drowning prevention. This study sheds light on the evolving practice of urban river bathing, its cultural significance, design typologies, and management challenges in the context of European cities.

KEYWORDS

Baignade en rivière urbaine, aménagement des rivières, approche transdisciplinaire, étude transeuropéenne

Urban river bathing, river management, transdisciplinary approach, cross-European study

1 HISTORY OF URBAN RIVER BATHING IN EUROPE

In the Middle Ages, riverfront beaches and lidos were mainly used for body washing. However, concerns over nudity led authorities to ban river bathing, and many bathhouses were demolished as they were seen as sites of debauchery (Gauthier, 2017). By the 19th century, learning to swim and leisure bathing regained popularity among the European upper classes, driven by a high number of drowning accidents and improved access to rivers via railways (Chaline, 2018). In 19th-century, due to the lack of bathrooms in homes, public/private floating bath facilities, often gender-segregated, were developed on rivers (Beanland, 2020). Industrialization in the late 20th century shifted swimming to organized sports in man-made pools, with the rise of clubs, standardized rules, and social stratification (Le Bas, 2000). During this period, rivers, particularly urban ones, were channelized to meet flood protection and navigation needs, leading to water pollution and ecological degradation (Brookes, 1989). This rendered many European rivers unsuitable for bathing, leading to widespread bans in major cities due to safety and health concerns—most of which remain in effect today. By the late 20th century, deteriorating water quality in urban rivers had led to the near disappearance of river bathing across European cities.

To improve freshwater quality, the EU introduced a series of directives starting in the 1980s, i.e., the Urban Wastewater Treatment Directive (91/271/EEC), the Nitrates Directive (91/676/EEC), and the Habitats Directive (92/43/EEC). Later, the Water Framework Directive (2000/60/EC) became the cornerstone of fluvial ecosystem management, aiming to achieve 'good ecological status' in rivers by 2027 across all EU member states. Since then, river restoration began addressing environmental and social needs, transforming urban riverbanks into accessible public spaces and making bathing feasible once again. The EU's Bathing Water Directive (BWD), first introduced in 1976 (76/160/EEC) and revised in 2006 (2006/7/EC), established bathing water quality standards to protect both public health and the environment. Amid a global shift towards ecological transition, many European cities are now re-opening rivers for public bathing. In Copenhagen, harbor baths have been developed since the early 21st century; In Paris, a 100-year bathing ban has been lifted for the 2024 Olympic Games.

2 GRASSROOT MOVEMENT TO REVIVE URBAN RIVER BATHING

Urban river bathing has become a social movement in Europe, driven by diverse grassroots efforts to reclaim urban waterways for public use. The continent-wide initiative the Big Jump was launched in 2002 encouraging people to reconnect with European rivers and lakes. To date, it has drawn over 200,000 participants from 34 countries. Around the same time, the Outdoor Swimming Society was founded in the UK (2006), advocating for the 'right to swim' in natural waters. Since 2010, the push to achieve 'bathability' in urban rivers has advanced, aligning with the overall improvement of water quality across European cities. In Berlin, Flussbad Berlin e.V. was established in 2012, receiving government funding in 2015 and 2019 for designing pools for the Spree canal. In Munich, after the city lifted its bathing ban in 2017 following the restoration of the Isar River (Kondolf et al., 2021), the NGO Isarlust e.V. petitioned the city council in 2019 with a proposal for the Isarflussbad. In Brussels, the organization Pool is Cool was founded in 2014 to reintroduce outdoor swimming in the city. More initiatives have emerged to revive river bathing as a cultural connection between cities and local communities. For instance, in 2024, Schwimmverein Donaukanal, a cultural association established in 2020, organized Vienna's first "Schwimm Parade" in the Danube Canal. This movement also triggers a shift toward the acceptance and institutionalization of urban river bathing - during the 2024 Summer Olympics in Paris, several swimming competitions were held in the Seine River. In the same year, London's Mayor, Sadiq Khan, committed to making London's waterways swimmable by 2034 (Mayor of London, 2024). On an international scale, 2024 also saw the expansion of this social movement with the new Swimmable Cities Alliance, a coalition across 21 countries.

3 TYPOLOGY OF URBAN RIVER BATHING DESIGN

Two types of urban river bathing designs are identified in Europe: Type 1, designated river pools, and Type 2, free river bathing zones. Type 1, designated river pools, function similarly to artificial swimming pools, using water directly from the river and floating on the river's surface within enclosed infrastructure, often made of wood. These pools are strictly managed by local municipalities and are open during the bathing season. Entrance is either free or at a low cost, with a capacity to accommodate a few hundred bathers. Lifeguards are employed on-site. Amenities such as showers, toilets, and restaurants are commonly available along the riverbank. In some cases, adjacent shallow pools, or "dipping zones," are provided for non-swimmers or children, constructed with concrete bottoms. Many Type 1 facilities have a long history, as exemplified by traditional bathing houses in Switzerland. These sites place an emphasis on supervised activity.

Type 2, free river bathing zones, refer to larger, open sections of the urban river used for unsupervised bathing.

These zones are minimally managed, with no entrance restrictions and no lifeguards, placing greater responsibility on bathers, who must possess strong swimming skills. Simple infrastructure, e.g., access points and benches on the riverbank, are often provided. Warnings are typically posted on-site, reminding people that they swim at their own risk. Floating lines or buoys are used to separate the bathing area from the navigation zone, allowing bathers to share the river with boats, cruises, and/or kayaks. Type 2 sites offer the informal, self-regulated bathing experience and emphasize shared use of the river as a communal space.

4 MANAGEMENT ISSUES

4.1 Microbial water quality

Faecal contamination of urban rivers poses health risks to bathers, as exposure to contaminated water can lead to various illnesses, including gastroenteritis, skin rashes, fever, ear and eye infections, and respiratory diseases (Tiwari et al., 2021). These risks arise from direct contact with the water through ingestion, inhalation, or contact with the skin and open wounds (Mouchel et al., 2021). The EU BWD establishes microbiological standards for bathing water quality across the EU with two faecal indicator bacteria (FIB), *E. coli* and intestinal enterococci, and classifies water quality into four categories—excellent, good, sufficient, and poor—based on FIB counts. The BWD requires Member States to establish a bathing water profile based on data from the current and previous 3 seasons, with a minimum of 16 samples over four seasons. These profiles must be regularly updated and Member States must ensure public access to this information through signs and/or online platforms.

However, faecal contamination in rivers exhibits high temporal variability due to heavy rainfall, with pathogen spikes shortly increasing disease risk. Studies have shown that the BWD's sampling frequency of every 3–4 weeks during the bathing season is insufficient to capture these rapid fluctuations, which may occur within hours (Karunakaran et al., 2024; Romei et al., 2021). Additionally, current methods for analysing *E. coli* and intestinal enterococci have a 24–48 hour lag between sampling and results (Seis et al., 2024). This delay presents challenges for timely public notification and effective management of public health risks.

4.2 River drowning

Rivers are a primary location for intentional fatal drownings, e.g., suicides, and unintentional fatal drownings, often resulting from accidental falls or during activities like bathing, swimming, fishing, etc., with many incidents linked to pre-existing medical conditions (Peden et al., 2016). The risk is influenced by a complex array of factors, including i) environmental conditions, e.g., heat waves, riverbank design, instream recreational activities, cultural, ii) social dynamics, e.g., traditional practices, individual's swimming proficiency (especially in rip currents; De Oliveira et al., 2021), as well as spatial poverty and inequality (Maghakian et al., 2024). Age and gender influence river drowning patterns across Europe, with males and young to mid-age adults are found at greater risk. River drownings are found in remote, unmonitored locations, with risky behaviors (e.g., bridge jumping, alcohol, and drug use), limited swimming skills, lack of local knowledge, e.g., among foreigners/tourists.

Effective river drowning prevention strategies must, therefore, address the multifaceted factors by promoting safe practices, enhancing swimming skills (especially in children), and implementing targeted measures for high-risk groups, i.e., tourists and foreign residents. The studied European cases present multi-tiered approaches to mitigate river drowning incidents, focusing on enhancing public perception of risks, regulating access, increasing supervision, and strengthening rescue preparedness. Clear warning signage on site can alert the public to potential hazards. Education initiatives, e.g., mandatory swimming and water safety lessons, are established in elementary schools across Austria, France, and Germany (Borgonovi et al., 2023), promoting foundational swimming and self-rescue skills from a young age. Rescue preparedness involves professional trainings for operators, e.g., lifeguards, and accessible resources for the lay public (Barcala-Furelos et al., 2021). Rescue equipment, such as life rings, life jackets, and inflatable bags, should be readily available at bathing sites.

5 CONCLUSION

The history of urban river bathing in Europe reflects its deep cultural roots, evolving from an integral daily practice to a nearly forgotten tradition due to industrialization and urbanization. Recent community-driven initiatives and institutional support have revitalized this practice. The rise of urban river bathing is supported by designs like designated pools and free bathing zones, tailored to diverse contexts. Addressing challenges of microbial water quality and drowning risks is crucial to making it a safe, sustainable, and inclusive activity for all.

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