



HAL
open science

La gestion des eaux pluviales urbaines hors du budget général : une discussion sur les modèles de financement en France

Jean-Luc Bertrand-Krajewski, Lôide Angelini Sobrinha

► **To cite this version:**

Jean-Luc Bertrand-Krajewski, Lôide Angelini Sobrinha. La gestion des eaux pluviales urbaines hors du budget général : une discussion sur les modèles de financement en France. Novatech 2023, Jul 2023, Lyon, France. hal-04165430

HAL Id: hal-04165430

<https://hal.science/hal-04165430>

Submitted on 19 Jul 2023

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

11^e Conférence internationale

LYON 2023 — L'eau dans la ville | Urban water

Organisée par

graie
PÔLE
EAU & TERRITOIRES

OTTHU

MÉTROPOLE
GRAND LYON

nôvatech

L'eau dans la ville | Urban water

Urban stormwater management outside the general budget:

a discussion on funding models in France

Lôide ANGELINI SOBRINHA, Jean-Luc BERTRAND-KRAJEWSKI

INSA | INSTITUT NATIONAL
DES SCIENCES
APPLIQUÉES
LYON

UFGD
Universidade Federal
da Grande Dourados

The paradigm shift and its needs



General community budget + Annex budget sanitation

i) Aid from public organizations, mainly water agencies (Lyon Metropole, 2022)

ii) Participation in an Urban Partnership Project of a maximum duration of 10 years (CEREMA, 2017)

iii) Possible aid granted under local or national calls for projects

iv) Private investment in commercial activity areas (ZACs) and eco-neighborhood development (Yang, 2013)



Adapting cities to climate change



Stormwater management & funding in France

Circular of 12 December 1978

Public stormwater management service (article L2226-1 of the CGCT)

Collection, transport, storage and treatment of urban stormwater

Does not have any specific funding!

Expenses on stormwater

Expenses on sanitation

General community budget M14 – Local taxes

20%

Budget annex Sanitation M49 (Section 7063)

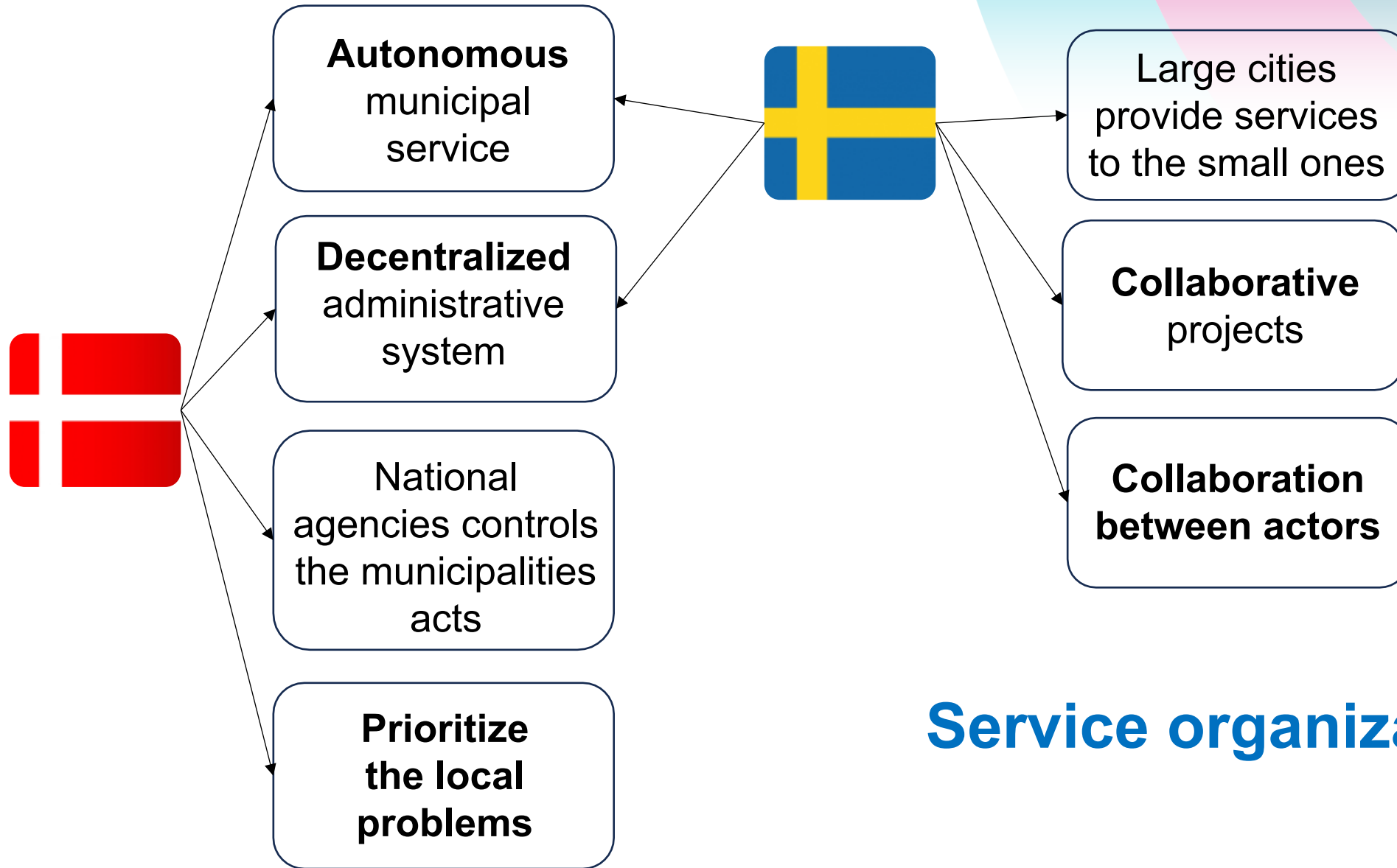
80%

Taxpayer

User fee for collective sanitation



Some exemples



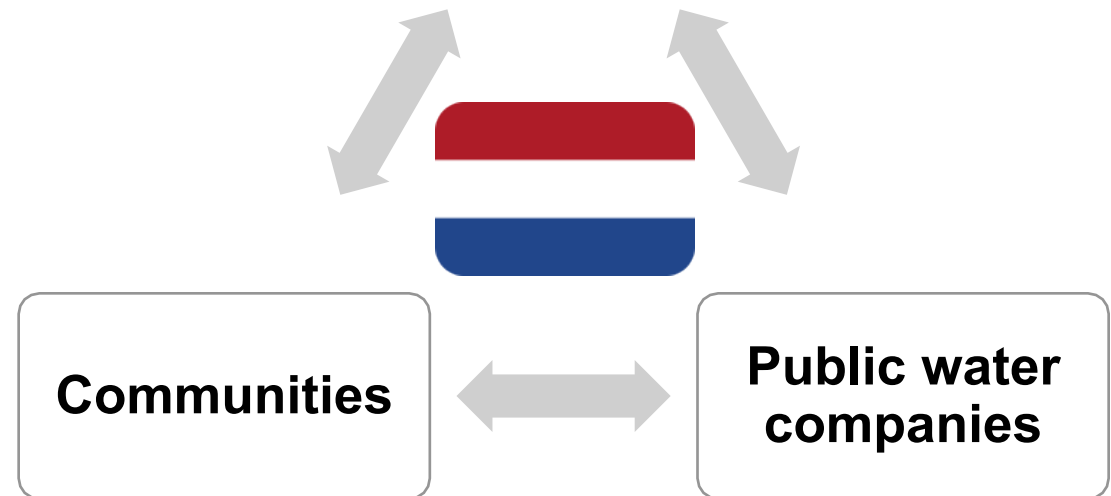
Service organization

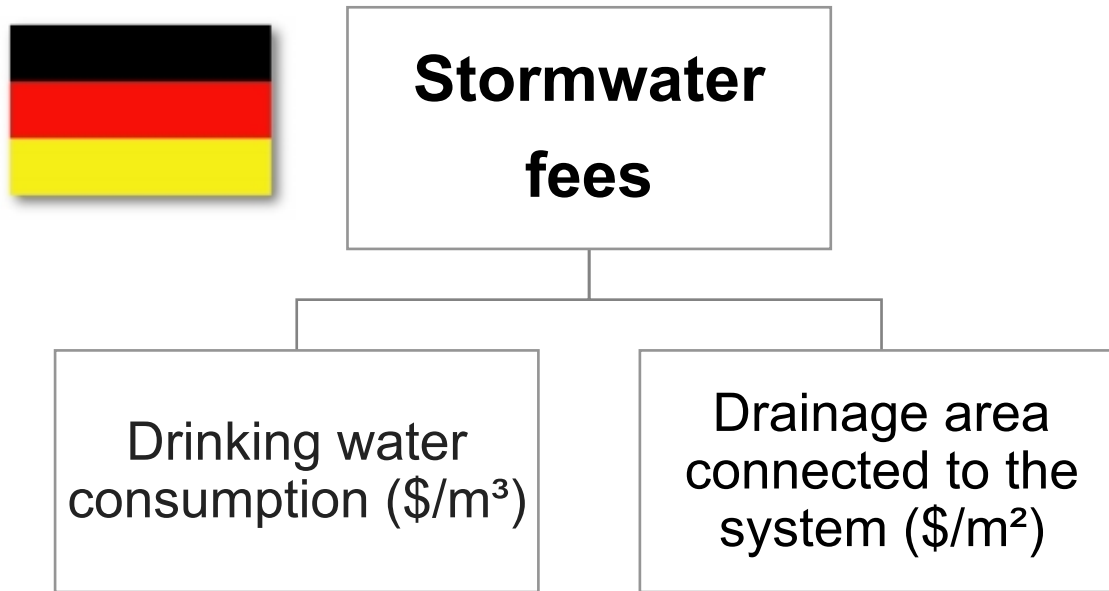
Regional
organization
responsible for water
management

Waterchappen

National bank
borrowing
capacity

Shared competence





Financing tool

Decreased the volume discharged in the traditional system (Dierkes, 2015)

Financial resources available for urban stormwater management

Germany

Co-financing from the general budget (municipal and national)	by impervious taxes for pavements
Sanitation fee based on water consumption	depends on the organization of the services
Charge based on impervious surface (in some cases)	
Fee exemption in case of disconnection (in some cases)	
Property and housing Taxes	by the municipal budget

Financial resources available for urban stormwater management

Denmark

Co-financing from the general budget (municipal and national)

Sanitation fee based on water consumption

40% for SWM

Charge based on impervious surface (in some cases)

Fee exemption in case of disconnection (in some cases)

Property and housing Taxes

Financial resources available for urban stormwater management

Netherlands

Co-financing from the general budget (municipal and national)

Sanitation fee based on water consumption

Charge based on impervious surface (in some cases)

Fee exemption in case of disconnection (in some cases)

Property and housing Taxes

rate per household

subsidies

paid to the Waterschappen

Financial resources available for urban stormwater management

Sweden

Co-financing from the general budget (municipal and national)

Sanitation fee based on water consumption

Charge based on impervious surface (in some cases)

Fee exemption in case of disconnection (in some cases)

Property and housing Taxes

user, installation, maintenance and other charges

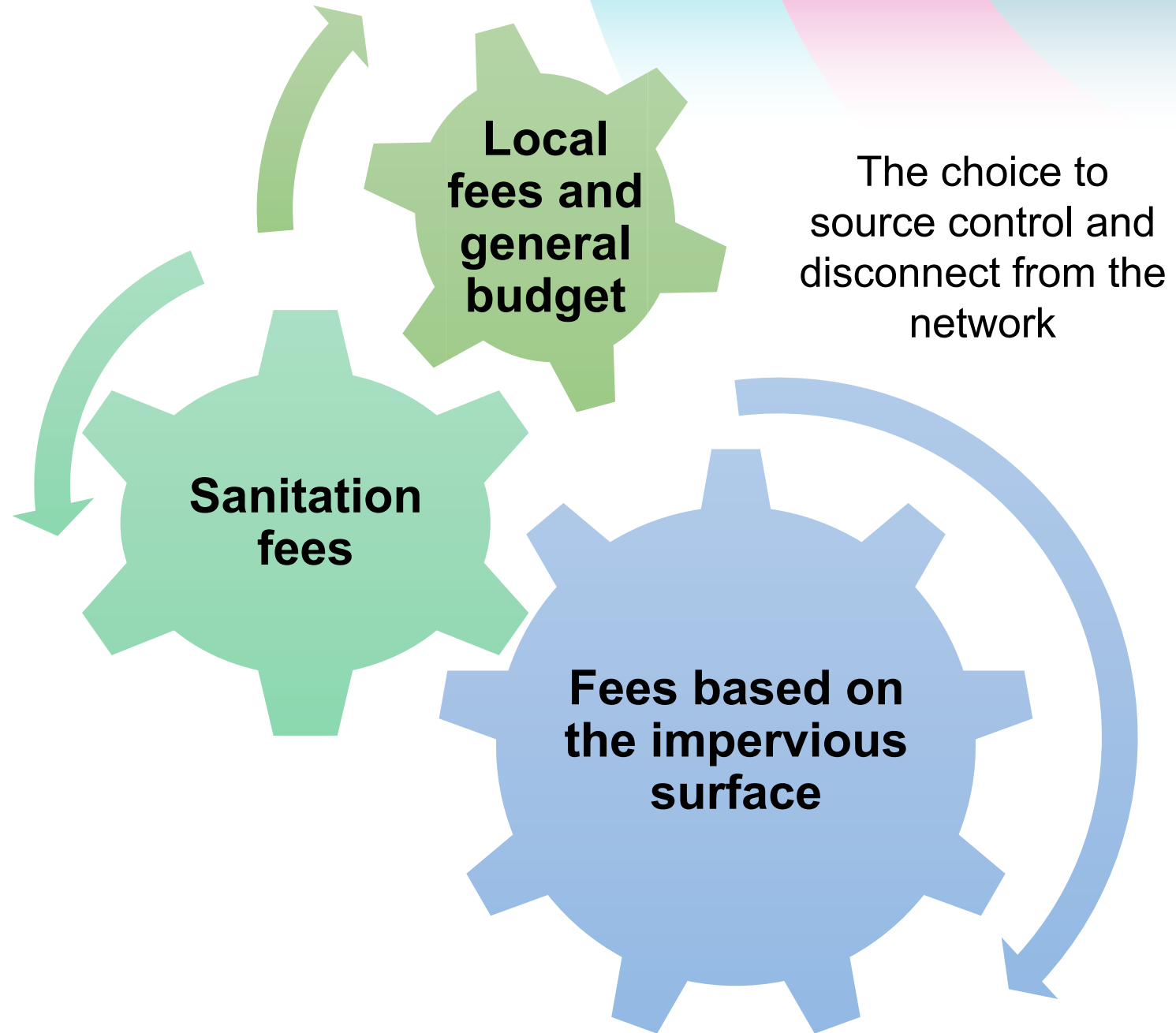
Financial resources available for urban stormwater management

	Germany	Denmark	Netherlands	Sweden	France
Co-financing from the general budget (municipal and national)	by impervious taxes for pavements				single resource
Sanitation fee based on water consumption	depends on the organization of the services	40% for SWM	rate per household	user, installation, maintenance and other charges	user fee for collective sanitation
Charge based on impervious surface (in some cases)					
Fee exemption in case of disconnection (in some cases)			subsidies		
Property and housing Taxes	by the municipal budget		paid to the Waterschappen		

Mode of operation of urban stormwater services/companies, financial resources and their legal status

	Germany	Denmark	Netherlands	Sweden	France
Stormwater sanitation fee	Yes	Yes	Yes	Yes	No
Financial autonomy of operation	No	Yes	Waterschappen yes, municipal services no	Yes	No
Public subsidies	Yes	No	No	No	Yes
Public subsidies for exceptional projects	Yes	Yes	Yes	Yes	Yes
Service status	Public or mixed economy	Public	Public	Public	Public or delegated to the private sector

Exemples of stormwater management funding



Final remarks



Integrated services

- Shorter investment cycles
- Valuing **co-benefits**

New financing possibilities

- **Supplementing existing financial resources**

Innovative instruments

- Involving public and private financing
- Promoting the **circular economy**

Infiltration
Reuse

Reduction of
heat islands

Biodiversity

Quality of life

Final remarks

...new financing possibilities
... innovative instruments

Will the issue of stormwater management funding be included in the National Plan?

...or maybe in the Water Framework Directive!

How to find a way to better finance stormwater management in France?

How to account for co-benefits in funding?



Thank you!
Merci!

loide.angelini-sobrinha@insa-lyon.fr

jean-luc.bertrand-krajewski@insa-lyon.fr

INSA | INSTITUT NATIONAL
DES SCIENCES
APPLIQUÉES
LYON

UFGD
Universidade Federal
da Grande Dourados



References

- CEREMA (2017). Le Projet Urbain Partenarial (PUP). Available in: <http://outil2amenagement.cerema.fr/le-projet-urbain-partenarial-pup-r471.html>. (accessed 21 Dec. 2022).
- Chouli E. (2006). La gestion des eaux pluviales urbaines en Europe: analyse des conditions de développement des techniques alternatives. Thèse de doctorat, Ecole Nationale des Ponts et Chaussées, Paris, France, 266 p. Available in: <https://pastel.archives-ouvertes.fr/pastel-00002263/file/TheseChouli.pdf> (accessed on 21 Dec. 2022).
- Code Général des Collectivités Territoriales (2023). Gestion des eaux pluviales urbaines. Available in: <https://www.legifrance.gouv.fr>. (accessed on 15 May. 2023).
- Collectivités locales (2023). Instruction Budgétaire et Comptable M4: Plan comptable M4 – Services publics industriels et commerciaux. Exercice 2023. Available in: <https://www.collectivites-locales.gouv.fr/>. (accessed on 15 May. 2023).
- Collectivités locales (2023). Instruction Budgétaire et Comptable M14: Tome 1 – Collectivités locales. 2023. Available in: <https://www.collectivites-locales.gouv.fr/>. (accessed on 15 May. 2023)
- Dierkes C.; Lucke T.; Helmreich B. (2015). General Technical Approvals for Decentralised Sustainable Urban Drainage Systems (SUDS)—The Current Situation in Germany. Sustainability ISSN 2071-1050. (accessed on 20 jun. 2023).
- ESPACE TÉLÉCHARGEMENT MÉLI MÉLO. Available in: <http://www.graie.org/eaumelimelo/Meli-Melo/Espace-telechargement/>. (accessed 15 Jun. 2023).
- Geyler S.; Bedtke N.; Gawel E. (2019). Sustainable Stormwater Management in Existing Settlements—Municipal Strategies and Current Governance Trends in Germany. Sustainability 2019, 11(19), 5510; <https://doi.org/10.3390/su11195510>. (accessed on 20 jun. 2023).
- Lyon Métropole (2022). La Métropole s'engage avec l'agence de l'eau Rhône-Méditerranée-Corse : lutter contre la dégradation des milieux aquatiques, améliorer la qualité de ses ressources, rendre la ville perméable. Available in: https://www.grandlyon.com/fileadmin/user_upload/media/pdf/espace-presse/dp/2022/20220905_dp_agence-eau.pdf. (accessed 21 Dec. 2022).
- Nickel D. ; Schoenfelder W.; Medearis D.; Dolowitz D. P. ; Keeley M. & Shuster W. (2013). German experience in managing stormwater with green infrastructure. Journal of Environmental Planning and Management, DOI:10.1080/09640568.2012.748652. (accessed on 20 jun. 2023).
- IWA 2023. The IWA Principles for Water-Wise Cities. 2nd ed. <https://iwa-network.org/projects/water-wise-cities/> (accessed 15 Jun. 2023).
- Yang Y. (2019). Analyse du financement de la gestion des eaux pluviales: apport des pratiques à l'échelle internationale et de l'étude d'instruments financiers. Sciences de l'environnement. Université de Lorraine, Nancy, France, mémoire de Master, 62 p. Available in: <https://hal.inrae.fr/hal-02610041/document>. (accessed 21 Dec. 2022).