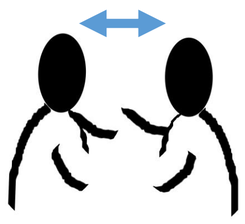
Micro Megas

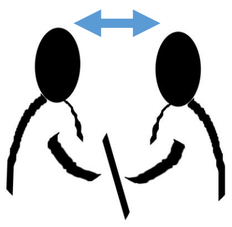
Aims of SCMs (Stormwater Control Measures) regarding micropollutant in urban wet weather effluent : Comparison of the performance of source control vs "end of pipe" systems

stormwater management, source control systems, city, micropollutants, performance, perceptions, actors, followed, methods, innovative metrology ...

Exchanges co-building



Hand on results



Questions

What can we expect from different source control systems?

Reduced peak flow? Micropollutant reduction? Maintenance simplification? Costs? Climatic improvement? Adverse effects limitation? ... What is the difference between Source control and End of pipe systems?

What are the perceptions and representations of these devices and micropollutants from user and manager point of view?

Perceptions of the impact on the functioning of the systems themselves or impact on the development of practices related to the devices?

What prescriptive tools can be implemented for stakeholders?

(Planning, Design, Management)

Aims & Organisation :

Principles: Mix closely research skills (social sciences & engineering sciences) and operational skills

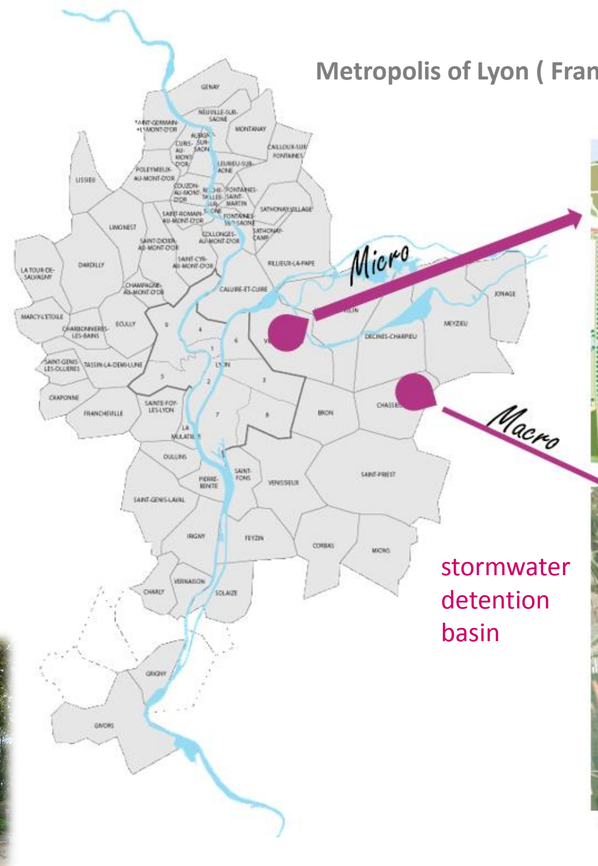
Tasks:

Task 1 : Methodology, internal coord., external coord. with the French network on Urban Water

Task 2 : End of pipe and Source control syst. monitoring

Task 3 : Characterization of the perceptions of micropollutants & technical devices

Task 4: Results and knowledge dissemination



3 source control syst. monitored

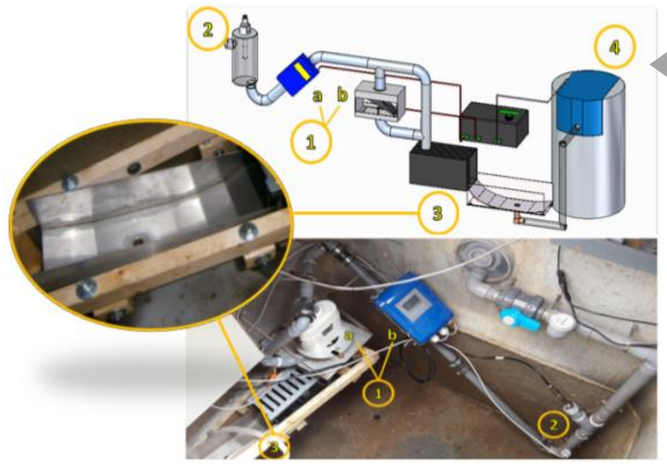
2 swales, 1 trench & 1 porous parking lot (Campus)

Public devices draining surface runoff water from residential area and university site

EVALUATE PERFORMANCE OF SCMs
Continuous Monitoring : Inflow & Outflows for all systems, Turbidity, Temperature, Conductivity + Campaigns focused on new chemicals like pesticides, alkylphenols, PBDEs, Bisphenol A ...+ Metals & PAHs

ANALYSIS OF PERCEPTIONS OF DIFFERENT STAKEHOLDERS INVOLVED IN SCMs

- Semi-structured interviews to assess practitioners' perceptions of MP and stormwater management
- Questionnaires dedicated to users of sites equipped with SCMs
- Changes in the narrative accounts covered in technical journals from the eighties up to now
- Socio-anthropological approach (immersion into municipal services), to assess the representations of staffs in charge of SCM design and maintenance



Monitoring system in measurement chambers at the outlet of decentralized sites. [1] Flowmeter (a. electromagnetic, b. tipping bucket), [2] Conductivity & T°, [3] sampling bucket, [4] Automatic Samplers.

1 centralized syst.

1 detention basin (Django Reinhardt)

Public device monitored since 2002 (OTHU) draining stormwater from and urban and industrial catchment (separate network + detention and infiltration basins at the outlet

EVALUATE PERFORMANCE OF SCMS REGARDING MP REMOVAL (same as SCMs)

ANALYSIS OF PERCEPTIONS OF DIFFERENT STAKEHOLDERS involved in Centralized syst. (same as SCMs)

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This project, launched in March 2015 (the end of the program: March 2019) has been prepared and will be conducted in cooperation with two complementary French projects around Stormwater ROULEPUR AND MATRIOCHKAS within URBIS together the OneVu observatory in Nantes, OPUR in Paris and in Lyon OTHU