

A performing depollution system for runoffwater, preserving biodiversity

LIFE ADSORB Project

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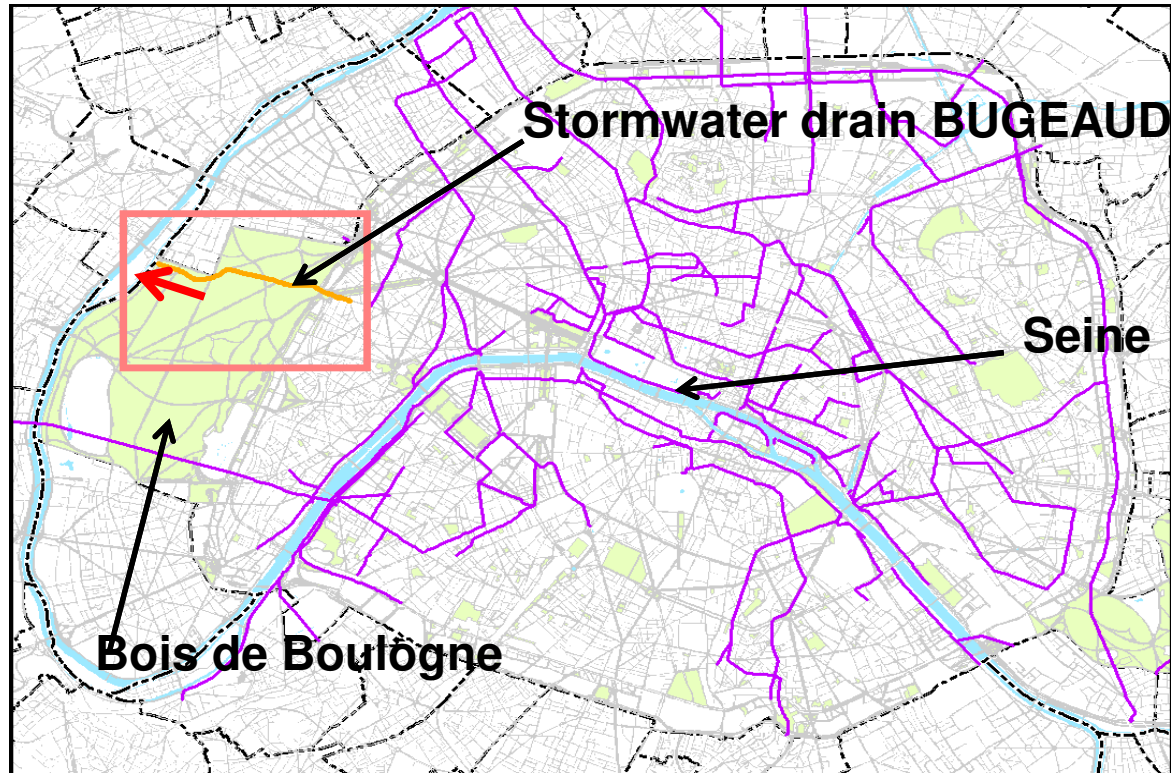
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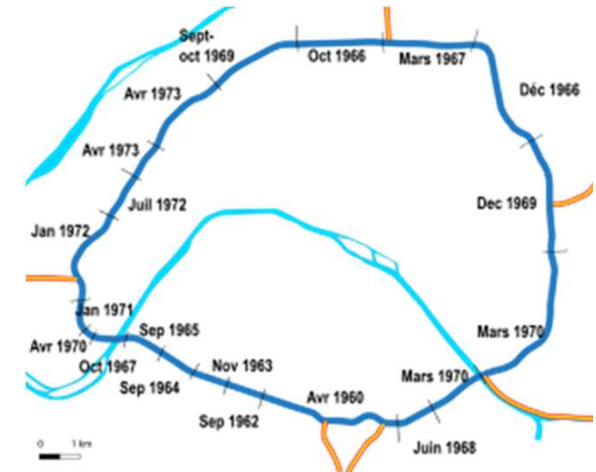
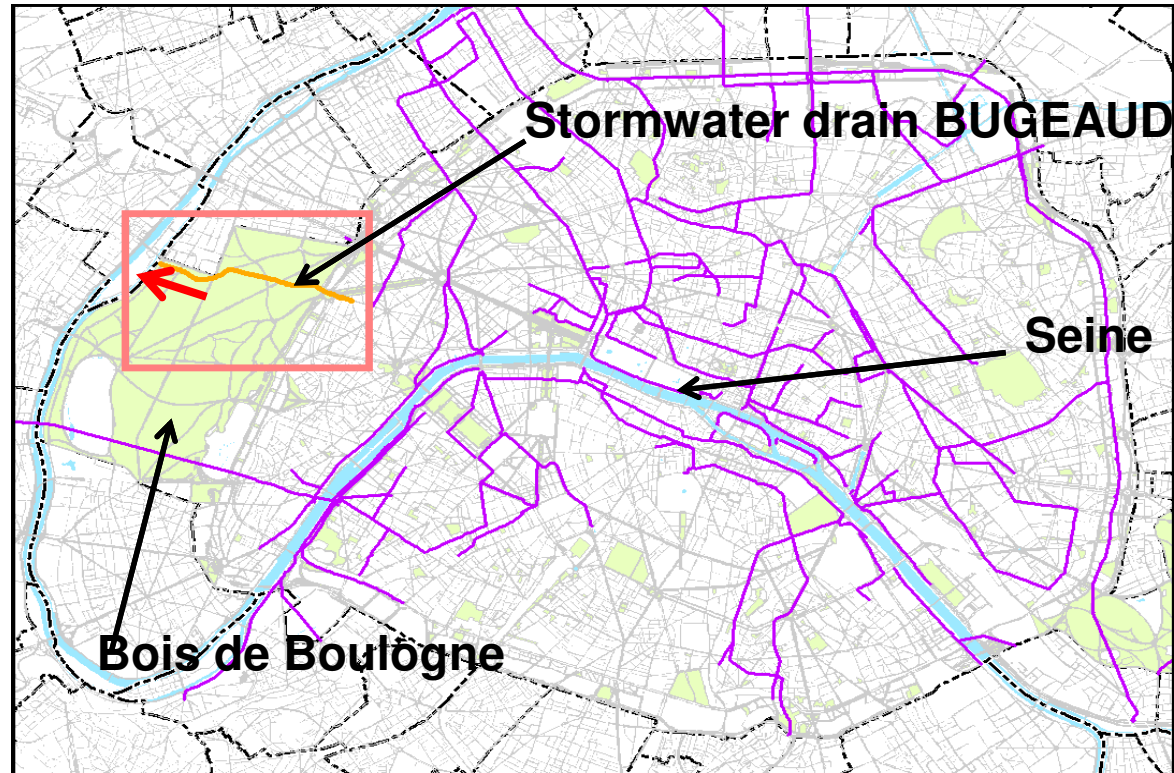
Protection of the river Seine against stormwater runoffs



Bugeaud drainage system



Bugeaud drainage system



The « boulevard
périphérique »

180 000-250 000
vehicules / day

- Stormwater runoff from a highly circulated road
- Clear water (dry weather)
- Combined sewer overflows(3%)

Regulation and challenges

Objectives for Bugeaud operation

- Reduce by 95 % the annual pollution load to the river Seine
- Test an innovative treatment system for urban highways
- Integrate the treatment system in a natural environnement and enhance biodiversity

Pollutants targeted:

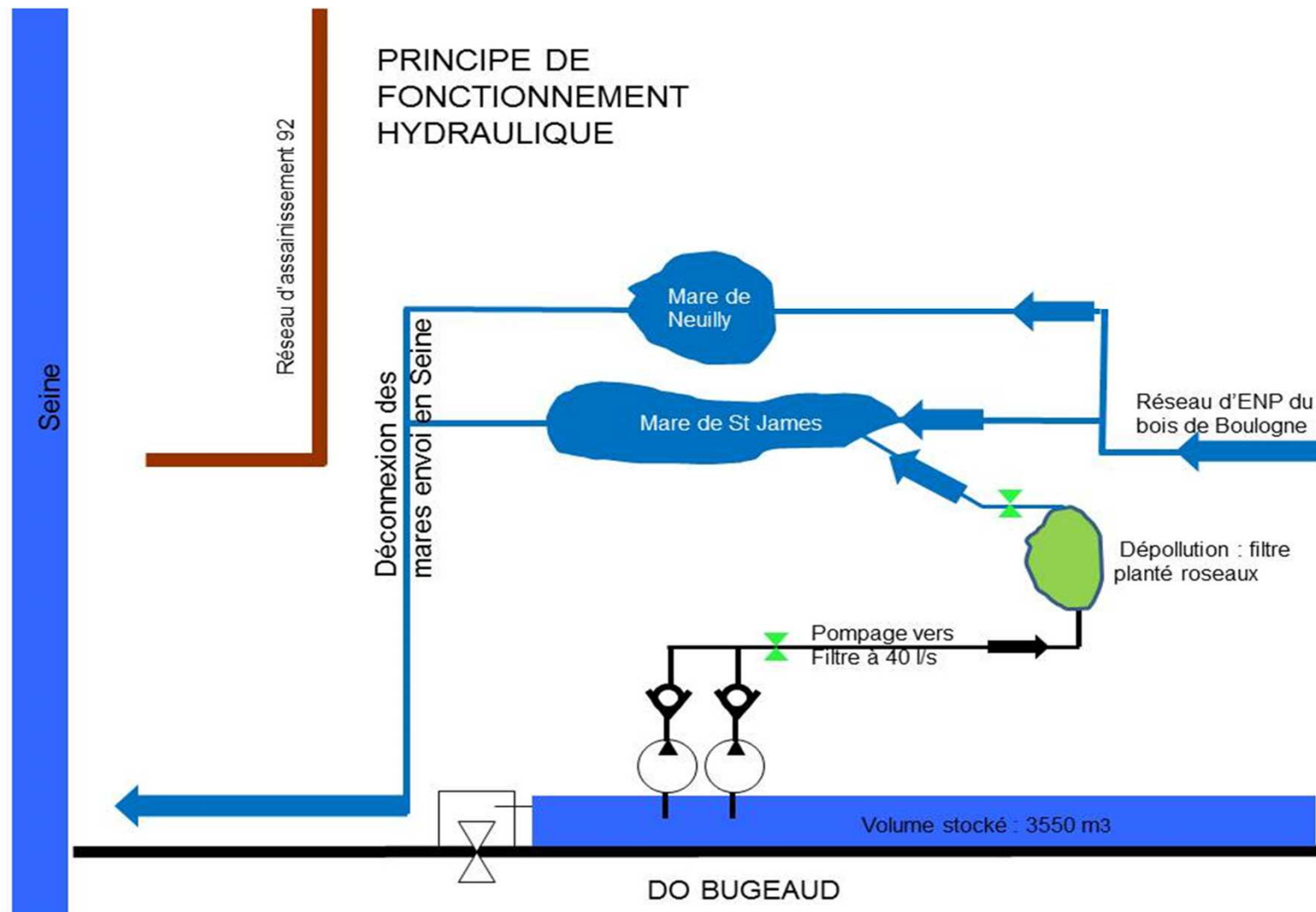
- « Macro » pollutants (TSS, C, N, P)
- Metals and organic micropollutants (Hc, PAH, BPA, alkylphenols, phthalates)

POLICY IMPLICATIONS

- Water framework directive 2000/60/EC
- Bathing water directive 2006/7/EC
- Urban waste water directive 1991/271/EEC
- and their transpositions into French law.



The proposed solution



The proposed solution

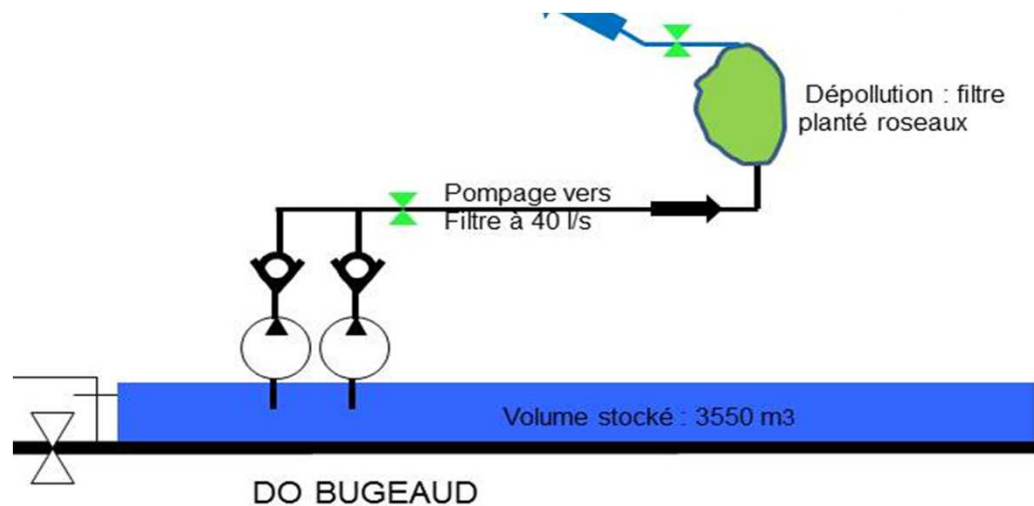
Innovative treatment system

Consists of 3 parts:

- 3500 M3 storage
- Pumping system
- Vertical reed bed filter



Coupling of green and grey solutions
Ecologic engineering
Allows for retention and biodegradation



**Life Adsorb
demonstrator**

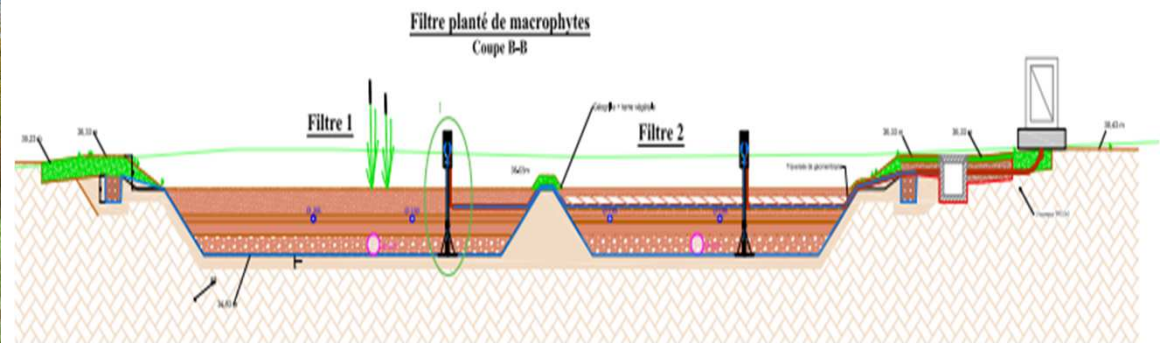
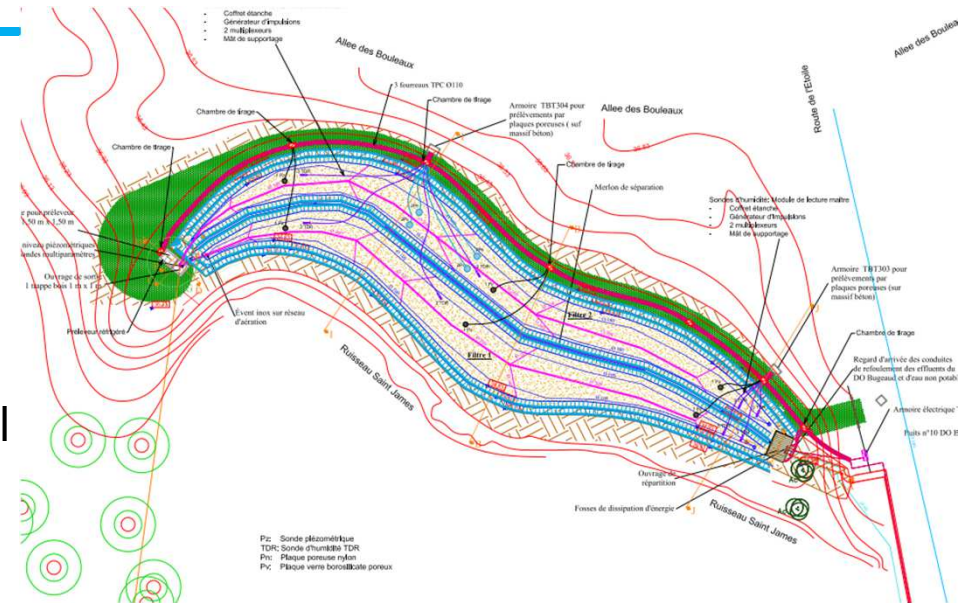


The innovative treatment system

Innovative treatment system

Detail of the reed beds:

- 2 compartments
 - 1 classic
 - 1 with specific adsorbant laterial (®Rainclean)



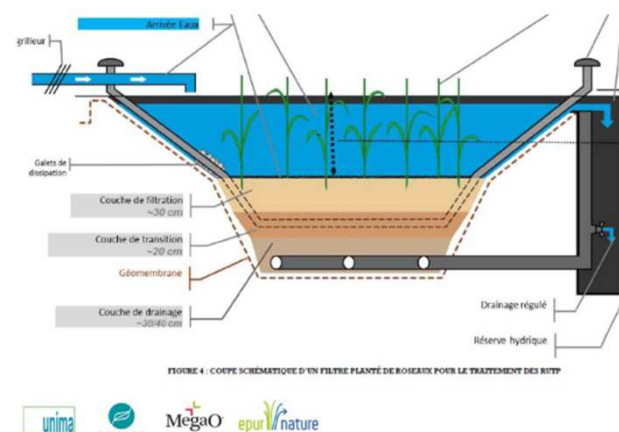
Specific challenges of the Life Adsorb project

- Evaluation and upgrading of the demonstrator exploitation by a interdisciplinary consortium
- Development of new tools for decision support
- Ensure the transferability of the demonstrator



In the continuity of previous projects

- **SEGTEUP (2011- 2014)** guidance document « Gestion des filtres plantés à écoulement vertical pour la gestion des rejets urbains de temps de pluie (réseaux séparatifs et unitaires) »
- **ADEPTE (2014-2019)** aide au dimensionnement pour la gestion des eaux pluviales par traitement extensif dont filtres plantés à écoulement vertical – traitement des macro polluants, <http://.adepte-pluvial.org>
- See Novatech D6 WETLANDS « Treatment of urban stormwater with treatment wetlands : experience from 2 french full scale sites »



Evaluation and upgrading of the demonstrator exploitation

Metrological
monitoring

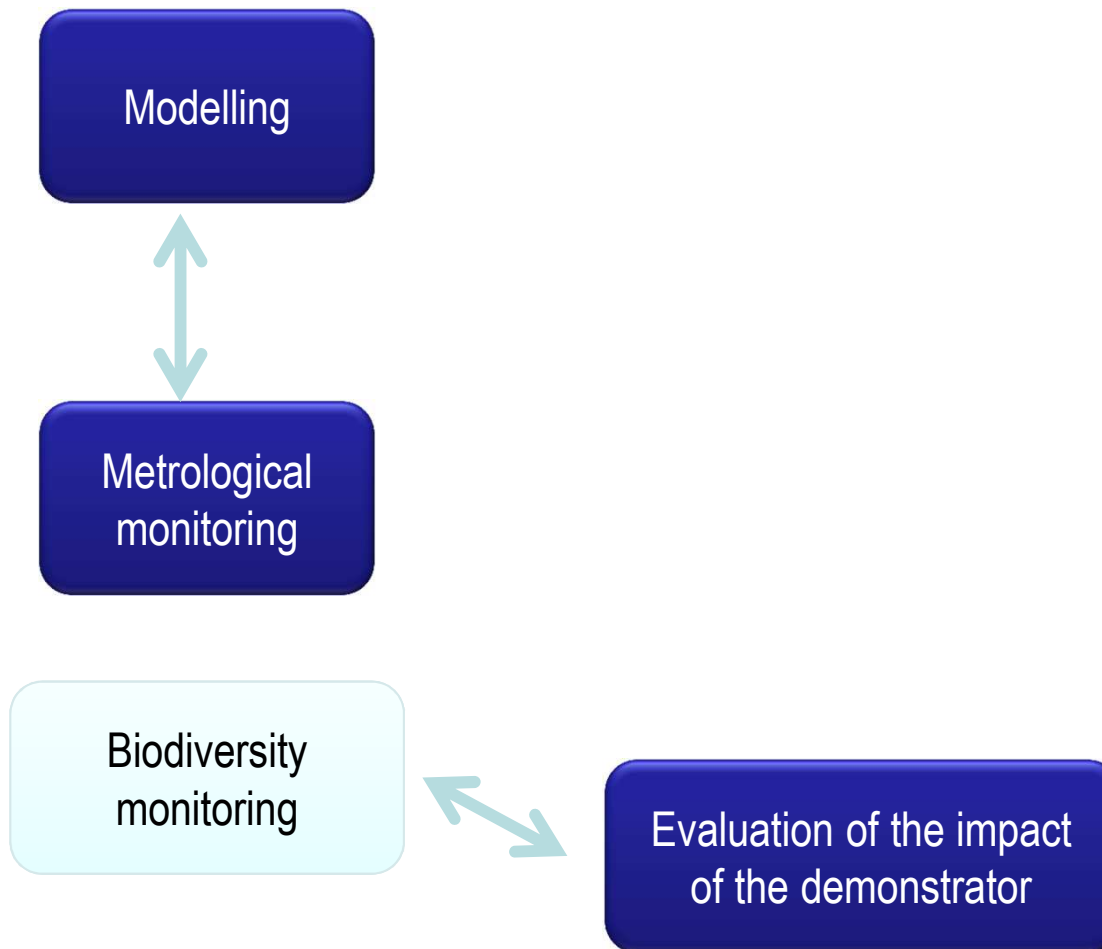
Biodiversity
monitoring



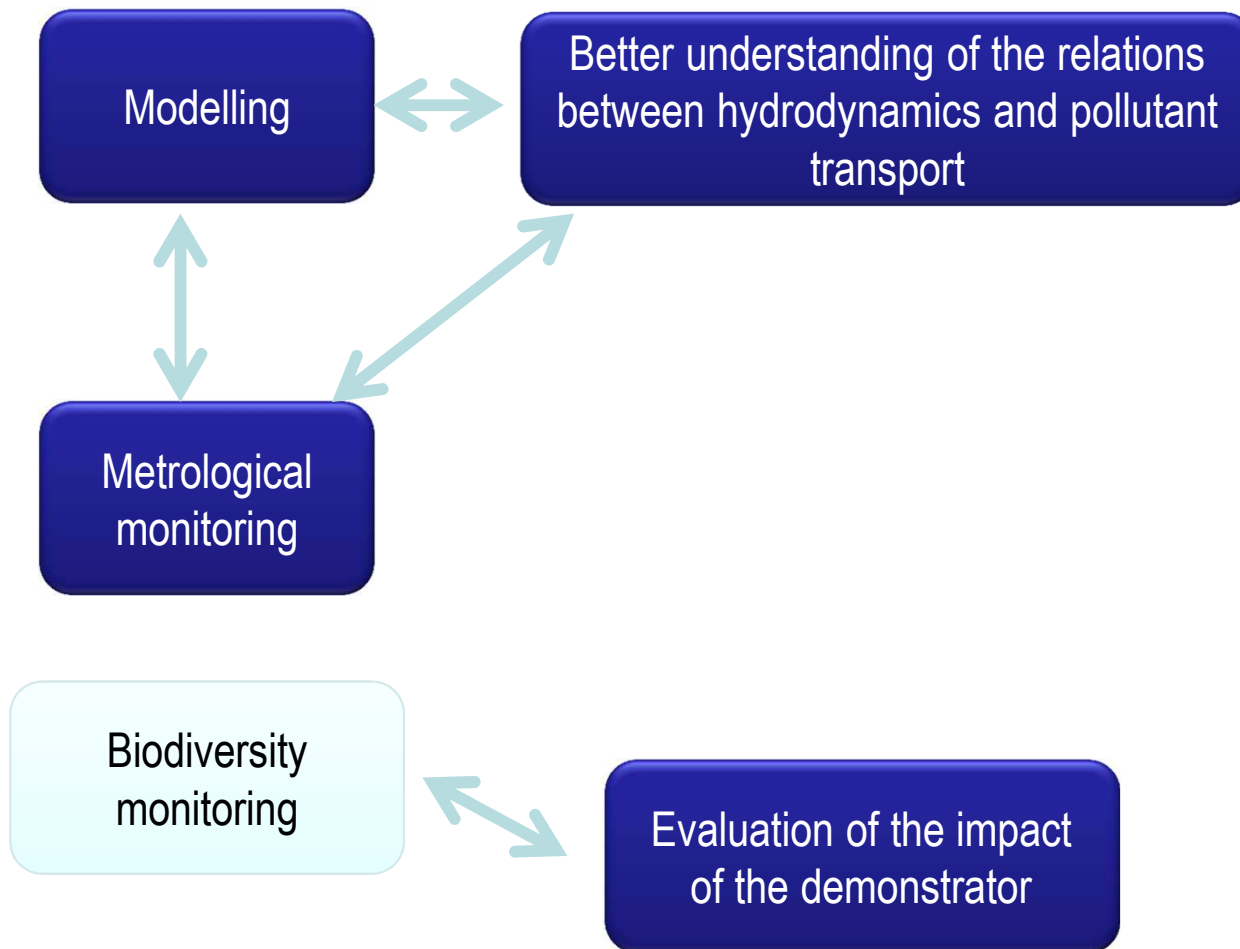
l'eau dans la ville / urban water



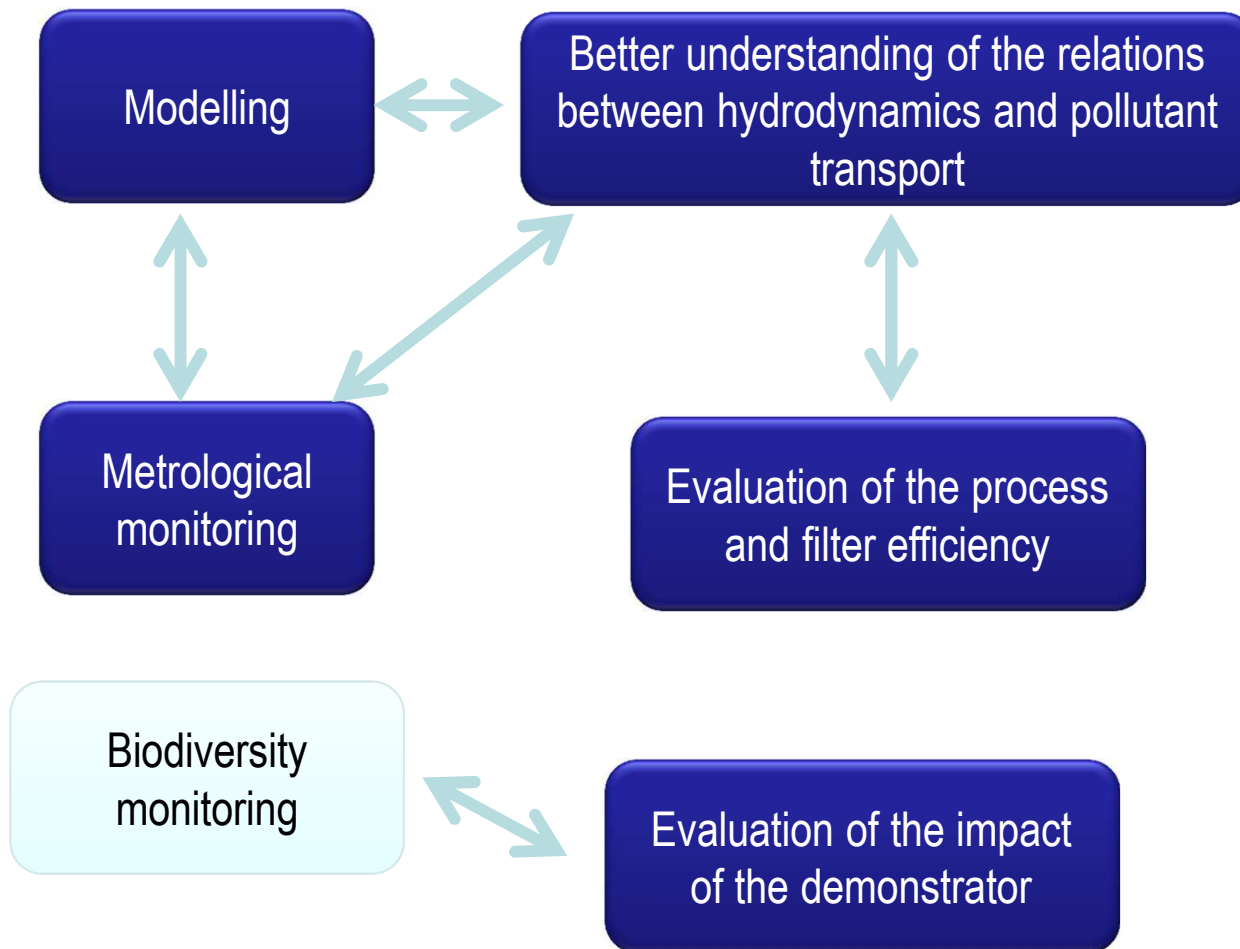
Evaluation and upgrading of the demonstrator exploitation



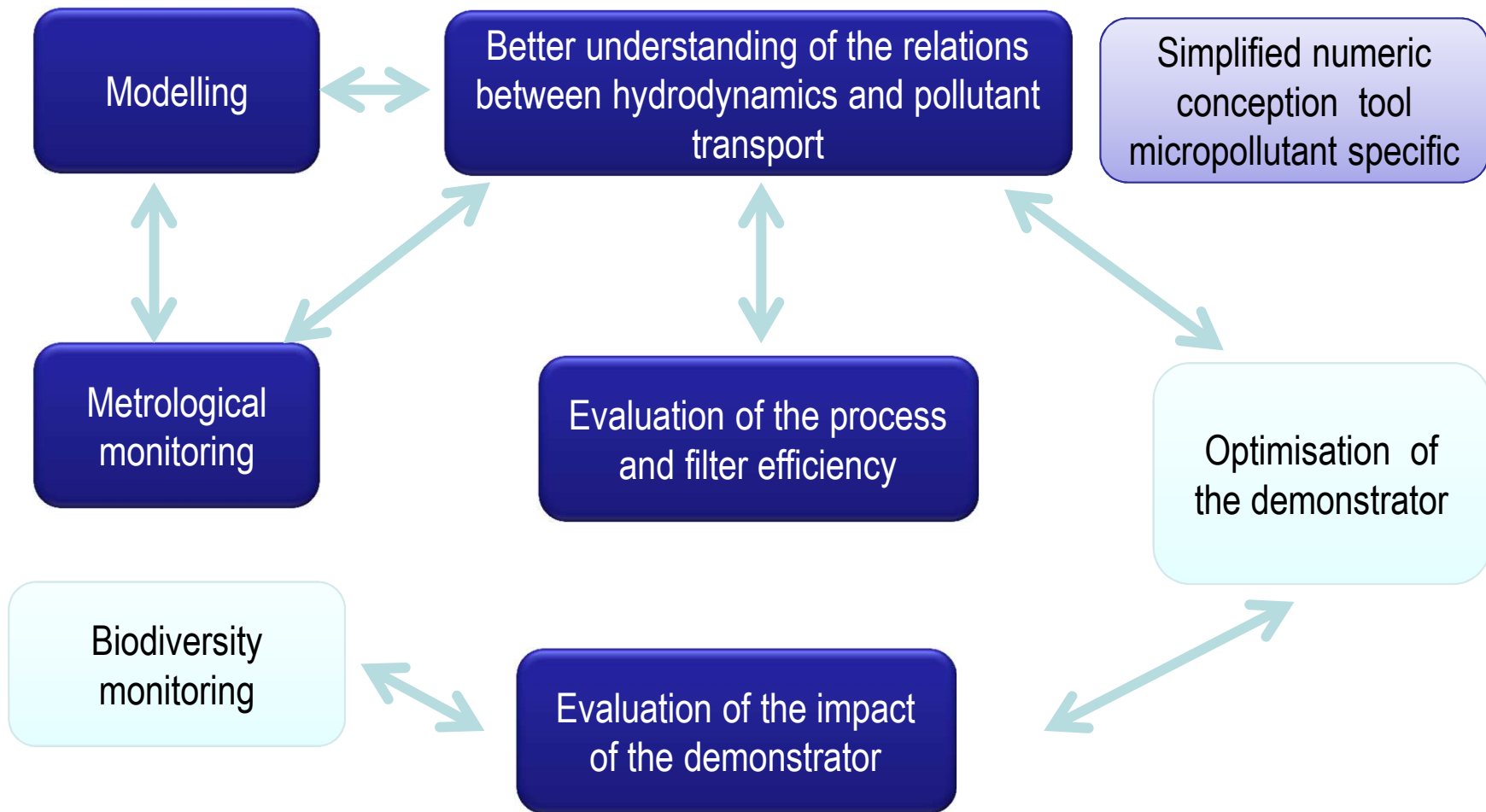
Evaluation and upgrading of the demonstrator exploitation



Evaluation and upgrading of the demonstrator exploitation



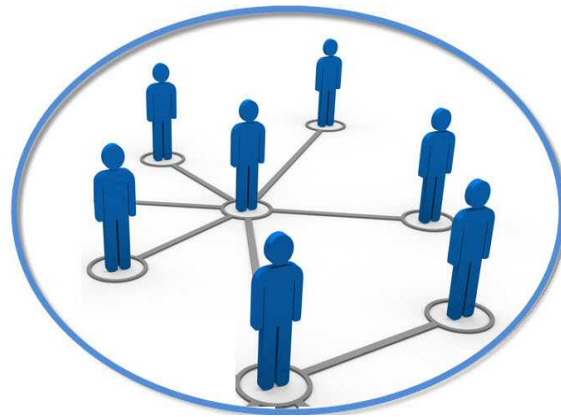
Evaluation and upgrading of the demonstrator exploitation



The sociologist point of view

Evaluation of the socio –economic impact

- Among professional practices of the operators
- Among the visitors of the Bois de Boulogne



Analysis and characterisation of the actors networks involved in the demonstrator's life

Dissemination



REPLICATION, TRANSFER :

- Final guide and an operational tool developed to support the design and scaling of new treatment systems copied from our solution but fitting specific local conditions
- Share our results at national and European level
- Support to the international network of ecologic engineering companies to promote the technology (see www.globalwettech.com)
- Internet web site and newsletter : January 2020

MARKET UPTAKE :



- Nowadays, the lack of scaling tools taking micropollutants into account is an obstacle to the development of this technology sector. Our project aims to overcome this difficulty

Thank you for your attention

