

# Which levers and which scenarios to reduce pharmaceuticals residues in water cycle ?

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# **Context, issues & observations**

#### A stimulating cross-border context:

- A dynamic territory, a growing population
- In Switzerland: micropollutant treatment in WWTP (large WWTPs and sensitive environments) in France: risk and pressure assessment
- complementary approaches

## **PERCEPTION SURVEY**

### Methodology

- Target audience: water & health stakeholders, local population
- 20 semi-structured interviews, 3 focus groups,
  179 questionnaires (66 professionnals and 113 inhabitants)

### **Observations:**

- Increased consumption of pharmaceuticals
- Knowledge enhancement (dose-effictiveness relationship, detection, PBT index, ...)
- Proven presence of drug residues in the environment
- Effective WWTP treatments, but quite expensive
- Little thought on source control measures

#### Key lessons on perceptions:

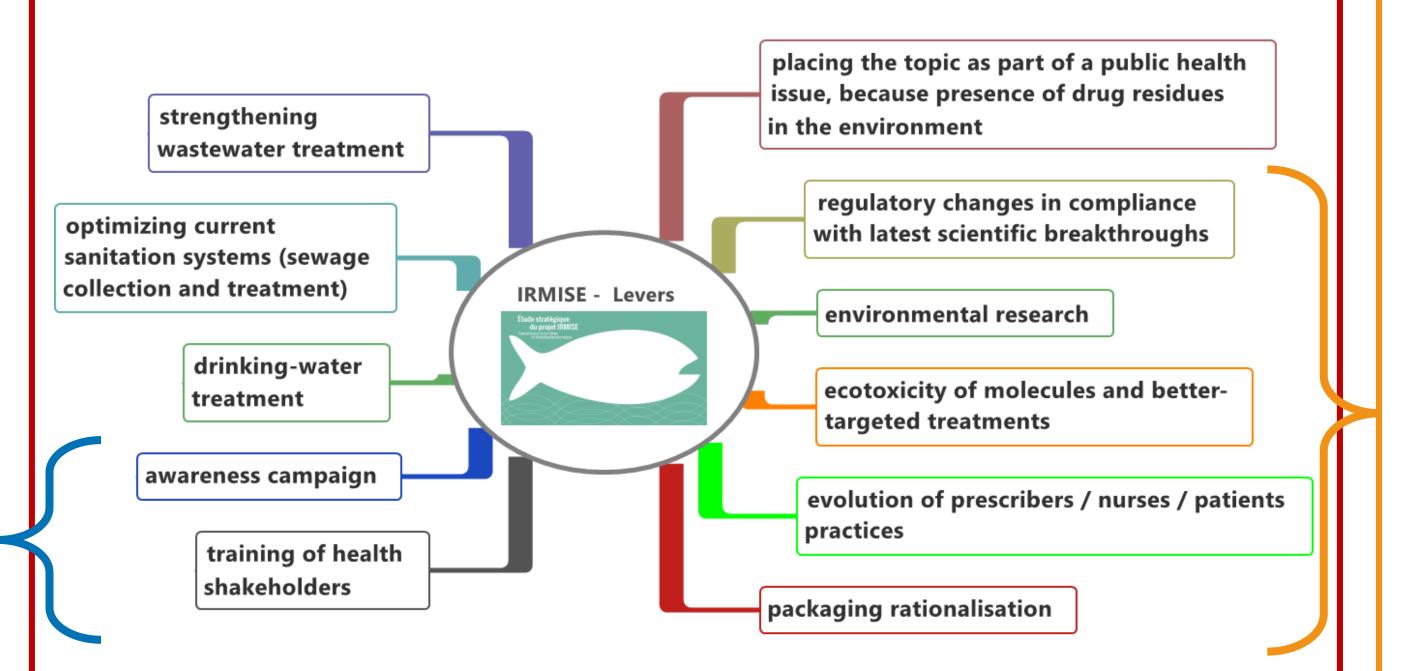
- WWTP treatment is a solution, but not the only one
- Regulation (prohibitions, controls, packaging...) is an essential tool to take action
- The management of unused medicinal products is a good "catchy" topic
- Promote and open the debate on the price of water

MediATeS SIPIBEL Site Pilote de Bellecombe

Awareness of the 'pharmaceuticals in water' issue

> An experimental approach

**STRATEGY** Levers identification



#### LEVERS IN HEALTH CARE PRACTICES



• A survey at the CHAL hospital, on practical solutions to limit the polluting discharges of a health care facility.

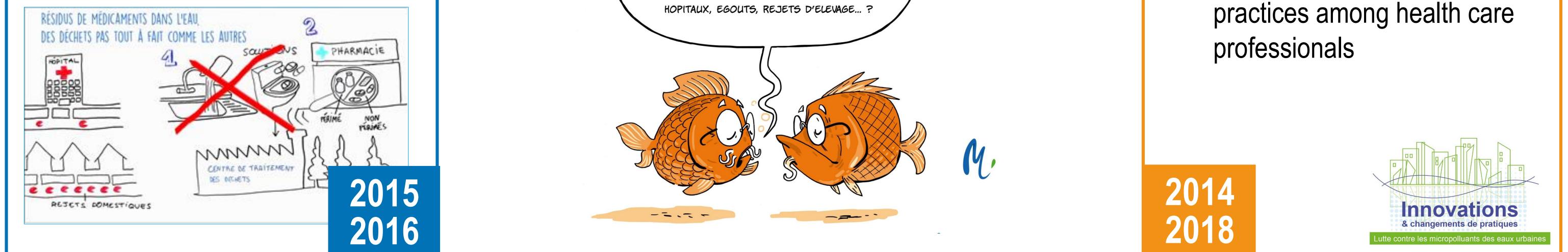
- The definition and the collective ownership of messages and materials
- Messages for:

The institutions: place the topic as part of a public health issue - What do drug residues become once in the water?

- Current state of research?
- How to take action?

Health trainers: inform health professionals about the issue and related best practices: prescribers, pharmacists and nurses

Materials: advocacy kits including hand drawn videos and informative resources



**Messages:** We can all take action! We are all responsible!

Each of us, in our own way, let's take responsability for our own health and preserve our environment! Let's seek out new solutions!

#### **Precautions:** Do not warn unnecessarily Healh and comfort of the patient above all else

LA PATHOLOGIE, LA PATHOLOGIE... BIEN SUR CHER CONFRERE, MAIS UNE FOIS LE DIAGNOSTIC ETABLI, ENCORE FAUTFIL SAVOIR A QUELLE SOURCE ALLER SE SOIGNER ! HOPITAUX EGOUTS REJETS D'ELEVAGE 3

- A research part:
- Socio-technical survey: among health care professionals - on technical objects, systems or devices in hospital practicises and home care;
  - among institutional stakeholders - on the conditions for the launching of pharmaceuticals
- Experiment: to test the conditions of a change in practices among health care



Bellecombe site - SIPIBEL is a field observatory on hospital effluents and urban sewage treatment plant, animated by The Bellecombe "Syndicat" (managing the WWTP) and the Graie, The Rhone-Alps Group of Research on the Infrastructures and Water. It mobilises local organisations involved in water and hospital management, industrials and scientists. SIPIBEL is the support of research programs, including the French-Swiss project IRMISE arve aval (2012-2015), focused on the impact of micropollutant discharges from WWTP downstream of the Arve catchment and on the Genevese Aquifer, the SIPIBEL-RILACT project (2014-2018) on "Risks and measures related to pharmaceutical, detergent and biocide discharges in hospital and urban effluents" and the SIPIBEL-MediATeS project on "Awareness of the 'pharmaceuticals in water' issue". These projects are supported by the Rhone-Mediterranean and Corsica Water Agency, the Auvergne - Rhone-Alps Region, the French National Agency for Water and Aquatic Environments, the French Ministries of Ecology and Health, the Rhone-Alps regional public health authority in the framework of the regional plan for health and environment 2 (PRSE 2), the Haute-Savoie Department and the European Union.

