

Request for knowledge partners (July 12th, 2018)

Project title: **ECOTOX**icity of waste waters in the chemical industry

Acronym: ECOTOX

Project ID	
Type	Collective research (COOCK)
Period	1-2 years
Starting date	TBD
Total project budget (€)	± € 300.000,00
Total man months	TBD
Subsidy percentage	60%
Amount of subsidy (€)	TBD
Coordinator	TBD
Industrial partners	essencia vlaanderen + 10 chemical companies not disclosed at the moment
Executing Partners	TBD

Project description

Introduction

A wide variety of products are made in the chemical manufacturing industry, typically requiring large volumes of chemicals, materials, and substances that are used throughout process operations. Waste streams generated in the chemical industry can be laden with contaminants, toxins, nutrients, and organic content, which could effect the eco-system and human's life. This presents unique challenges in terms of treatment, especially as regulations become more stringent.

The potential effects of contaminants of complex waste water streams, however, are not sufficiently expressed by their loads or concentrations. The impact of hazardous and toxic contaminants with concentrations close to the limit of detection can be significant in contrast to high concentrations of non-toxic substances. Thus, waste water from chemical industry sites might show toxic effects. Alternatively, synergetic effects of different individual streams, having no toxic effects themselves, might be observed when they are mixed together either in the sewer system or in the receiving water.

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As a consequence, it is becoming more and more important to monitor and to assess the potential ecotoxicological effects of chemicals, disposed in waste water. This will also become mandatory as from 2020 on, as a result of the so-called BREF CWW (Common Waste Water and Waste Gas Treatment/Management Systems in the Chemical Sector).

Goal

The chemical sector wishes to take a pro-active role in the development of methodologies to identify the sources of possible ecotoxicity in its waste waters. In concrete terms, the first step is to build up knowledge on methods for research into the origin of ecotoxicity of waste waters and its impact on the aquatic environment. The objective (and evidence-based) scientific knowledge that is build up during the project is the basis for later consideration on possible measures to reduce ecotoxicity with maximum efficiency. It is the ambition of the project partners to scale up the knowledge gained to other sectors and to other Member States.

Expertise

With this Request for Partners, we would like to invite **universities/knowledge institutes/consultants** that have expertise, technology or knowledge relevant to the project to respond to this request.

To reach the project goals, the consortium is particularly searching for the following (non-limitative) expertise:

- Measurement of toxicity in the effluent according to the applicable ISO standards;
- Study the origin of the ecotoxicity (identification and testing of identification methods for different types of waste water);
- Study the impact on the receiving surface water (risk assessment in the receiving water + determination of the monitoring frequency).

This list of tasks, however, is not limiting, so that other expertise deemed relevant to reach the project goals can also be offered. **Please already give a rough estimation of costs associated with the above-given tasks (e.g. cost of one ecotoxicity test, costs associated to study the origin of the ecotoxicity, etc.).**

[How to reply to this request](#)

Because this is a collective research project according to VLAIO COOCK modalities, the companies involved are not research partners themselves, but are contributing through the participation in a user committee. Already ten companies (together with essenscia vlaanderen) have expressed their interest to participate in the project. At least five of these companies will deliver their specific waste water as a case to be studied in this project.

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Please send an e-mail before **August 24th, 2018**, 12:00 PM (noon) to your association representative (see contacts listed below), and describe your organisation or research group, the technology, expertise or solution you can offer and your experience:

- KU Leuven: Bert Lagrain (bert.lagrain@kuleuven.be);
- UAntwerpen: Ann Aerts (annfb.aerts@uantwerpen.be);
- UHasselt: Lieve De Doncker (lieve.dedoncker@uhasselt.be);
- UGent: Elisabeth Delbeke (Elisabeth.Delbeke@UGent.be);
- VUB: Philippe Westbroek (philippe.westbroek@vub.ac.be);
- Centexbel: Isabel De Schrijver (ids@centexbel.be);
- Sirris: Ben Vandeputte (Benjamin.Vandeputte@sirris.be);
- BBEU: Brecht Vanlerberghe (brecht.vanlerberghe@bbeu.org);
- VITO: Karolien Vanbroekhoven (karolien.vanbroekhoven@vito.be);
- Other (e.g. independent consultancy and engineering offices): Luc Van Ginneken (lvanginneken@catalisti.be).

Evaluation

Catalisti, together with essenscia vlaanderen and the initiating companies, will review all responses obtained and will make a selection of the best (complementary) proposals in line with the scientific approach/goals and with the needs and valorization perspectives of the main industrial partners. After submission of your offer, you can be contacted by telephone or invited to a live meeting (if this is deemed necessary by Catalisti and essenscia vlaanderen) to further elaborate your offer. Please contact Luc Van Ginneken (lvanginneken@catalisti.be; (+32)(0)477/97.99.47) or your association representative if you have any questions concerning this RFP.

END OF RFP

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