



# TOXICROP

## TOXICROP NEWSLETTER 1

June 2020

### CYANOTOXINS IN IRRIGATION WATERS: Surveillance, Risk Assessment, and Innovative Remediation Proposals

TOXICROP aims: to cover knowledge gaps and concerns raised related with the use of raw waters contaminated with cyanobacteria and cyanotoxins in crop irrigation. Research and innovation activities will be developed to (a) assess the risk of use of eutrophic waters in agriculture; (b) development of low-cost technologies of water treatment and (c) improve the detection and quantification of cyanotoxins in water, soil and plant materials

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### TOXICROP | | Events ORGANISED

#### TOXICROP Kick-off meeting

Location: Porto  
Venue: CIIMAR  
Date: 20-21/02/2019

The TOXICROP consortium partners met for the first time in the installations of CIIMAR. This meeting marked the start of the project and aimed to discuss with the partners the workplan and the management strategy foreseen for TOXICROP project. It was an opportunity for partners to socialize and establish closer discussions on future joint work.

Funded by the European Union



This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 823860



### **TOXICROP Workshop**

Location: Porto  
Venue: CIIMAR  
Date: 22/02/2019

This 1-day workshop was coupled with the KOM and aimed to provide an overview of the complementary research that is developed by the partners of TOXICROP consortium. Topics debated during the workshop included the toxicology of cyanobacteria, methods of cyanotoxins analysis, environmental monitoring and water treatment. The workshop was open to Porto University students and scientists.

### **Training: Sample pre-treatment for cyanotoxins analysis**

Location: Arequipa - Peru  
Venue: UNSA (Universidad Nacional de San Agustín)  
Date: 15/10/2019

A training session was organized for senior scientists and students from UNSA and technicians from SEDAPAR Drinking Water Station, to provide training on methodologies concerning the handling, storage and pre-treatment of water samples for analysis of cyanotoxins. The training session was held in the chemistry laboratory and organized by CIIMAR and UNSA researchers.

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## TOXICROP | | Scientific Missions

ORGANISED

### Arequipa - Peru

Location: Arequipa - Peru

Venue: UNSA

Date: 04/10/2019 – 01/11/2019

The researchers Alexandre Campos and Flavio Oliveira from CIIMAR, were in a scientific mission to Arequipa, Peru, to investigate the occurrence and distribution of toxic cyanobacteria and cyanotoxins in lakes of high altitude from the Andean Plateau. Together with colleagues from UNSA, the researchers were able to collect samples from El Pañe and Aguada Blanca reservoirs, and also to survey the Chilina agricultural area in Arequipa. The researchers were able to visit SEDAPAR Drinking Water station, in Arequipa.



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## TOXICROP | | Publications





Assessment of constructed wetlands' potential for the removal of cyanobacteria and microcystins (MC-LR)

This research paper is about the use of constructed wetlands for cleaning water contaminated with cyanobacteria and cyanotoxins. Laboratory experiments with assembled microcosm systems revealed that this technology is suitable for treating contaminated water, allowing removal rates of cyanobacteria cells above 94%. *Water* 2020, 12(1), 10; <https://doi.org/10.3390/w12010010>.



Article

### Assessment of Constructed Wetlands' Potential for the Removal of Cyanobacteria and Microcystins (MC-LR)

Guna Bavithra <sup>1,2</sup>, Joana Azevedo <sup>1</sup>, Flávio Oliveira <sup>1</sup>, João Morais <sup>1</sup>, Edgar Pinto <sup>3,4</sup>, Isabel M.P.L.V.O. Ferreira <sup>3</sup>, Vitor Vasconcelos <sup>1,5</sup>, Alexandre Campos <sup>1</sup> and C. Marisa R. Almeida <sup>1,\*</sup>

## TOXICROP | | NEWS

CIIMAR leads European study on water quality in agriculture

Link: <https://noticias.up.pt/ciimar-lidera-estudo-europeu-sobre-a-qualidade-da-agua-na-agricultura/>

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## TOXICROP | | Upcoming Events



WATMED9 Conference will be held in 8-10th July, 2020 at Marrakech, Morocco.

For more information, visit: <http://watmed9.uca.ma>



19th ICHA Conference will be held in October, 2021 at La Paz, Mexico.

For more information, visit: <http://www.icha2020.com>

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