

*Project Communication N° 1 (Publication: January 2019)*

## **Co-creation of innovative low cost technology for India's water challenges**

**The LOTUS ('LOW-cost innovative Technology for water quality monitoring and water resources management for Urban and rural water Systems in India') project assembles 21 outstanding European and Indian organisations with the aim to co-create, co-design and co-develop innovative low cost technology for tackling India's water and sanitation issues. LOTUS is funded by the EC DG Environment under the European Union Horizon 2020 Research and Innovation Programme and by the Indian Government. The project will be launched on February 1st, 2019.**

India is facing severe challenges in the provision of drinking water, waste-water treatment and management of water systems. Only around 30 percent of the population have access to drinking water from a treated water source and often only for a few hours during a few days each week. 37.7 million Indians are affected by water-borne diseases annually, including a large number of children. The rapidly industrialising economy and urbanisation stress the water system even more, and in many regions there is a shortage of water for agriculture, aggravated by climate change. These issues need solutions that are adapted to the conditions in India and can be provided at low cost so that a large fraction of the Indian people can profit from them.

LOTUS, a follow-up of the EC-funded PROTEUS project (<http://www.proteus-sensor.eu/>), will co-design and co-produce, in cooperation of EU and Indian partners, an innovative water quality chemical sensor, using advanced technologies (carbon nanotubes). The sensor can be tailored to different needs of different applications, e.g. drinking water quality monitoring, waste water treatment, environmental water monitoring and irrigation management. LOTUS will develop solutions for water management in these domains based on the novel sensor technology, using innovative methods and software.

The LOTUS solution will be demonstrated and showcased in a variety of use cases in India, covering urban and rural areas, drinking water and irrigation systems, river and groundwater monitoring, and wastewater treatment quality. Further development and production of the sensor are planned to take place in India after the end of the project, providing an advanced, but affordable, low cost product and solutions for water quality monitoring and water management.

LOTUS will promote social innovation by introducing co-creation, co-design and co-development approaches, engaging with multiple local stakeholders to facilitate successful EU-India cooperation in the water sector. This capacity development-based paradigm shift, building also on citizen science good practices, will lead to viable, affordable, sustainable and (socially) acceptable products and solutions and job creation.

The LOTUS consortium is composed of 21 partners: large industrial enterprises, public institutions, research institutes, SMEs and NGOs from 5 European countries and from several regions of India. It is coordinated by Ecole Polytechnique, Paris, France, and Indian Institute of Technology, Bombay.



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### About the LOTUS Project:

**Project Title:** LOTUS - 'LOW-cost innovative Technology for water quality monitoring and water resources management for Urban and rural water Systems in India'

**Project ID:** 820881









**Call:** H2020-SC5-12 – EU-INDIA Water Co-operation – Research and Innovation Action

LOTUS is co-funded by the European Commission under the Horizon 2020 programme and by the Indian Government, Ministry of Science and Technology

**Start Date:** 1<sup>st</sup> February 2019, **duration:** 48 months

**Total budget:** 5.48 Mln. €

### LOTUS Consortium Members:

 <p>ÉCOLE POLYTECHNIQUE UNIVERSITÉ PARIS-SACLAY</p>	<p><b>Ecole Polytechnique, France</b> <a href="http://www.polytechnique.edu">www.polytechnique.edu</a></p>	<p>With the collaboration of:</p>  
 <p>UNIVERSITY OF EXETER   Centre for Water Systems</p>	<p><b>University of Exeter, United Kingdom</b> <a href="http://www.exeter.ac.uk">www.exeter.ac.uk</a></p>	
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	<p><b>Eureka Forbes, India</b>  <a href="http://www.eurekaforbes.com">www.eurekaforbes.com</a></p>
	<p><b>Jalakam Solutions, India</b>  <a href="http://www.jalakamsolutions.com">www.jalakamsolutions.com</a></p>
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