# WATER DECONTAMINATION BY SUNLIGHT-DRIVEN **FLOATING PHOTOCATALYTIC** SYSTEMS

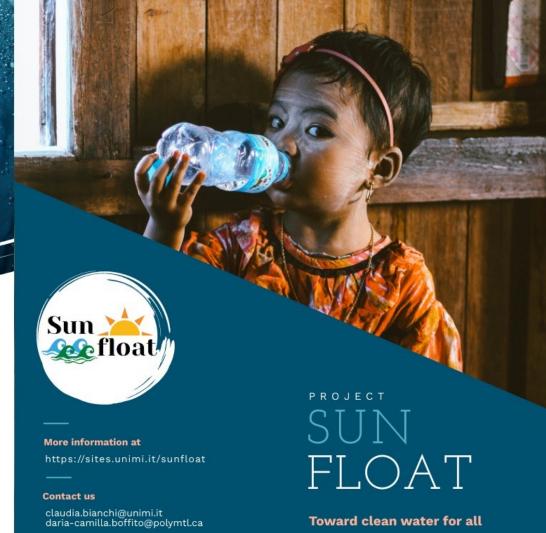
#### CONCENTRATE SUNLIGHT ON A FLOATING POLLUTANT-EATING DEVICE

A water tank with a tailored design will concentrate sunlight on a floating active component that purifies water thanks to photocatalysis.

#### **EXPECTED IMPACT**

The development of an affordable proofof-concept device will help improve the quality of life of populations affected by water scarcity.

It will also raise awareness the importance of sunlight as a sustainable resource for water pollution remediation.



## LACK OF **ACCESS TO** CLEAN WATER

## 1 in 10 people

In 2017, 785 million people lacked access to basic drinking-water services.

### 144 million

collect untreated surface water from lakes, ponds, rivers and streams, often contaminated by a mix of pollutants.



Share of population with access to improved water

N.A. >40 40-49 50-59 60-69 70-79 80-89 >90

World Health Organization (WHO), Progress on household drinking water, sanitation and hygiene I 2000-2017 Unicef and WHO, Safely Managed Drinking Water

#### SUNLIGHT-DRIVEN WATER PURIFICATION

Our device exploits sunlight to activate water purification, without the need of chemical reagents and costly treatments.

It is based on an innovative floating photocatalytic system. Photocatalysis is a proven technology that can kill pathogens and degrade common and persistent pollutants.



### TAKE ADVANTAGE OF THE **POWER** OF THE SUN



UNIVERSITÀ **DEGLI STUDI** DI MILANO



Remediation

**OUR TEAM** 

SUNFLOAT is an Italian and
Canadian joint
effort led by Prof.
Claudia L. Bianchi
and Prof. Daria C. **Boffito** 



POLYTECHNIQUE MONTRÉAL



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