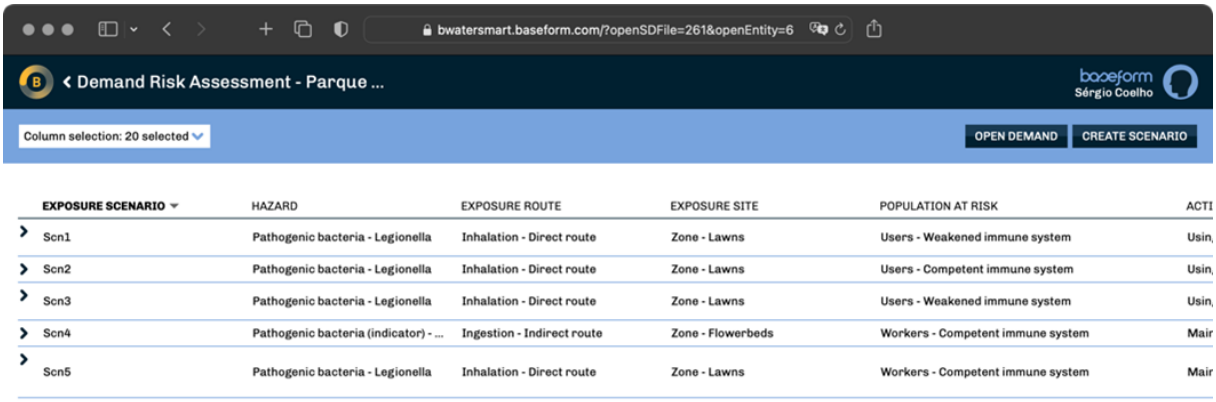
Product factsheet

Risk Assessment for urban water reuse module

Software solution



Description

A human and environmental risk framework that assesses supply/demand combinations, based on a range of current risk standards and regulations including:

ISO 16075 Guidelines for treated wastewater use for irrigation projects (2020, 2021),
ISO 20426:2018 Guidelines for health risk assessment and management for non-potable water reuse,
ISO 20761:2018 Guidelines for water reuse safety evaluation,
EU Regulation 2020/741 on minimum requirements for water reuse.
The tool works in combination with Tool #25 (Water-energy-phosphorous balance planning module) following the description included in the introduction to Tool #17 (Environment for decision support and alternative course selection). It works as a risk-based gatekeeper that must be cleared for any supply/demand combination to be considered for assessment in Tool #17. Each alternative to be tested for human risk and for environmental risk will undergo a sequence of steps to translate the standards above and will be graded for either or both risks. Depending on the risk level targeted for completion, it will be rejected (eventually go back to tool #25 for redesign), or otherwise cleared and move on to Tool #17.

This tool is functionally linked to Tool #25, which becomes aware of the alternative's risk score calculated here, if available.

The tool is deployable at any spatial scale as it applies to any supply/demand context, but indicative scales are city facility (e.g., public park), neighbourhood, city and region.

The tool is developed by Baseform using its own proprietary Java-based, web-centric software

platform designed for networked infrastructures, and is part of a set of four tools that also includes the afore-mentioned #17, #25 and #24 (Reclaimed water distribution network water quality model).

Training material of the risk assessment module for urban water reuse is available at https://youtu.be/xkjRRawFXLo.

Target audience

Water demand planners and decision-makers in urban management, municipal and water utility contexts.

Actors, their roles and interactions

The tool is aimed at water demand planners and decision-makers in urban management, municipal and water utility contexts, used in conjunction with Tool #25 (Water-energy-phosphorous balance planning module) and Tool #17 (Environment for decision support and alternative course selection).

This tool requires some knowledge of the key notions in public health risk and environmental risk. The software is extensive but not complex to navigate - essentially a logical sequence of risk-assessment questions.

Unique selling points

A specific, ready-to-use environment to check compliance of potable or non-potable water usage scenarios with ISO 16075, ISO 20426:2018, ISO 20761:2018 and the EU Regulation 2020/741 on minimum requirements for water reuse.

Technical requirements

Computer, tablet or smartphone with internet access.

Software data

- Initial release: 2023
- License type: Commercial

URL

https://bwatersmart.baseform.com

Technology applied by the product

- **Resource for Circular Economy**

Case Study applying the product

Lisbon, Portugal

https://mp.watereurope.eu/d/CaseStudy/45

Related tags

water Reuse Supply Demand