DHI MARKET AREA: URBAN WATER

WATER AND HEALTH

Controlling water-related health risks and ensuring safe water use

Ensuring water safety is high priority on the global agenda. Efforts are made to establish access to better sanitation, drinking water and recreational water. This will decrease the burden of waterborne diseases across the world. However, even in areas with proper water management systems, water-related health risks can still be experienced due to the impacts of climate change in urban areas. For example, extreme rainfall events in cities lead to exposure to contaminated water. This is caused by the intrusion of contaminated water into drinking water networks and sewer overflows into recreational water bodies. Thus, it's important to implement improved practices for water management taking health aspects into account.

THE CHALLENGES

- Reducing risk of exposure to contaminated water
- Identifying and quantifying water-related health risks
- Identifying critical points for controlling the risks
- Achieving real-time monitoring of hazards and risks
- Applying effective and timely control measures
- Meeting drinking and recreational water quality standards
- Managing the urban water cycle sustainably

OUR APPROACH

The best way to protect public health from water-related diseases is through evidence-based risk management. We support you in identifying and characterising health-related hazards and hazardous events in drinking and recreational waters. We have the tools to help you estimate, evaluate, control and monitor the risks of exposure to contaminants from all sources (flooding, sewer overflows, industry effluents, naturally occurring chemicals and so on.) We also have the knowledge to help you meet drinking and recreational water regulations and comply with water quality standards.

OUR SOLUTIONS

- Drinking water safety planning
- Analysis of microbial barriers in water supply
- Hydraulic modelling of bathing water quality
- Evaluation of health risks related to wastewater
- Combined hydraulic and water quality modelling to assess health risk during flooding
- On-line detection of Combined Sewage Overflows (CSOs) for early warning and prediction of bathing water quality
- Inclusion of health aspects in water management and climate change adaptation activities

THE ULTIMATE GOAL

EFFICIENT AND EFFECTIVE CONTROL OF WATER-RELATED HEALTH RISKS

One quarter of the global disease burden is due to modifiable environmental factors — including improper drinking water and sanitation

OUR TOOLS AND SERVICES

We can provide you with everything you need to control water-related health risks and ensure safe water use in your urban area. Our tools and services include:

- bathing water quality forecast
- application of Good Disinfection Practice (GDP)
- Quantitative Microbial Risk Assessment (QMRA)
- health and safety assessments of drinking water installations
- GIS-based tool for mapping of risks related to hospital wastewater, including pharmaceuticals and resistant microorganisms
- toxicological evaluation of chemicals
- combined modelling, including:
  - MIKE Powered by DHI water modelling software suite
  - MIKE ECO Lab (ecological modelling)
  - MonteCarlo simulation
- capacity building and training by THE ACADEMY by DHI, including water safety planning and QMRA

LEARN MORE

SOLUTION AND PRODUCT FLYERS

Learn more about what we can offer by reading our solution and product flyers, available in the dedicated collection on our Scribd library www.scribd.com/dhigroup

CASE STORIES

Read more about the projects we have undertaken worldwide by reading our case stories. They are available in a dedicated collection on our Scribd library www.scribd.com/dhigroup

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