



A NEW WAVE OF TREATMENT – INTEGRATED BIOLOGICAL SOLUTIONS

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ABOUT iWATER

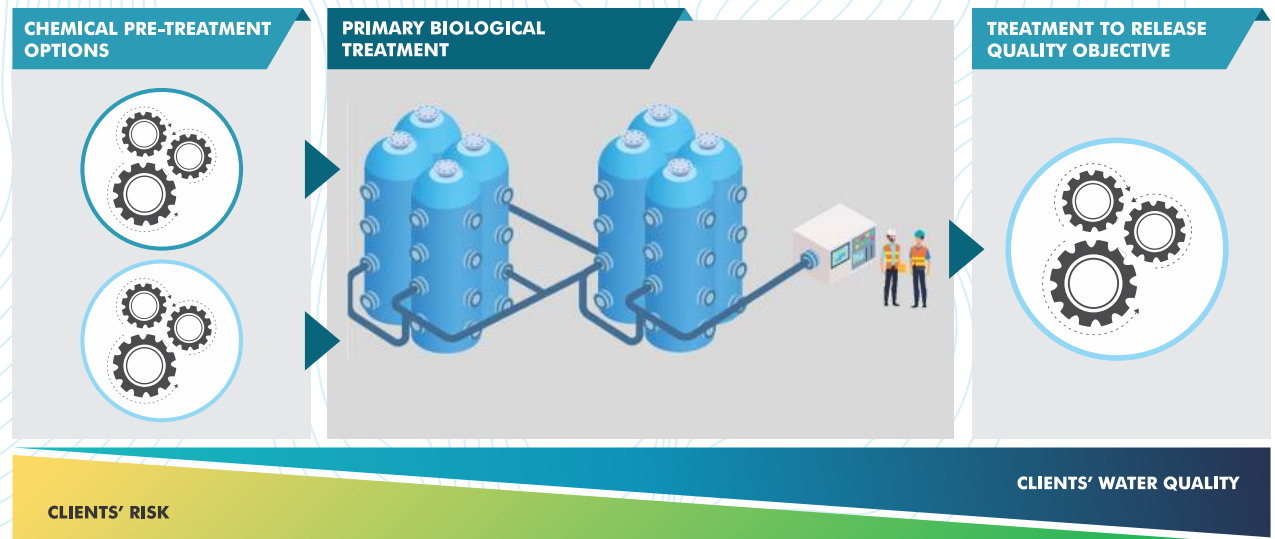
iWater is a leading biotechnology company focused on the management of microbial systems, which represents a new wave associated with the treatment of contaminated water and soil.

The group has extensive knowledge, know-how and skills in this area, and together with their local and international strategic partners, they are well-positioned to deal with the major challenges faced by especially developing countries, including South Africa, to reinstate quality to used water.

The Vision of iWater is to optimally innovate and integrate their scientific knowledge and networks to treat and restore the world's natural resources for future generations.

INTERACTIVE PHASED PROCESS

iWater develops and implements sustainable, cost-effective bio-technological technologies to remediate contaminants of concern by integrating other types of treatment technologies.



The solutions are packed as turnkey remediation modules, supported by remote monitoring and data integration for the treatment, re-use, and final closure processes on-site. It also provides quick intelligence for rapid responses, using preventative engineering, while empowering clients with effective decision-making and risk management tools.

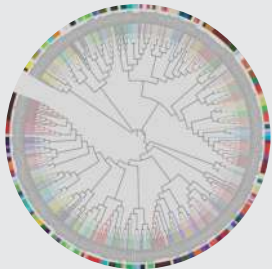
PHASE I (4 to 8 weeks)

Laboratory optimisation and demonstration

PHASED INTERACTIVE PROCESS



iWATER
KNOWLEDGE TO ENVIRONMENTAL SOLUTIONS

Site visit	Microbial diversity characterisation
<p>Sign non-disclosure agreement.</p> <p>Identify site risks and liabilities.</p> <p>Investigate current site data and water sampling.</p> <p>Fill information gaps with analysis e.g. total organic carbon (TOC).</p> <p>Selected chemical analysis to be independently verified.</p>	<p>Identify indigenous bacterial species.</p> <p>Identify consortium functionality for biological solutions.</p> <p>Viable cell growth and plate count.</p> <p>Biochemical oxygen demand (BOD) analysis and donor selection.</p> 

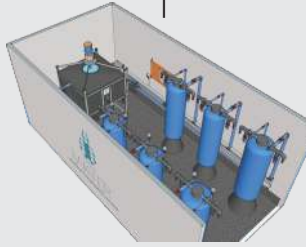
LABORATORY OPTIMISATION

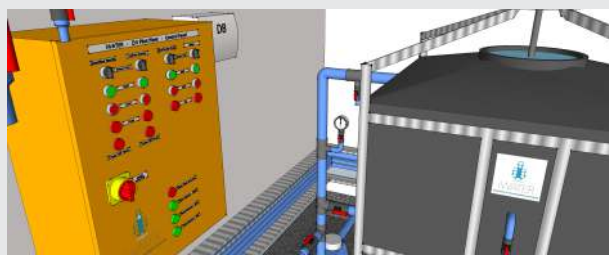
Optional

Biostimulation	Column Studies	Chemical treatment
<p>Selection of tolerant bacterial communities.</p> <p>Optimise culturing conditions and needs.</p>	<p>Simple or complex donor selection.</p> <p>Optimum retention</p> <p><i>In situ</i> planning if required</p> <p>Waste characterisation</p>	<p>Suitable pre-treatment options:</p> <ul style="list-style-type: none"> • Active filters • Chemical reductants • Absorbents

PHASE II (3 to 6 months)

Treatability demonstration plant using single module

Site meeting	Plant design
<p>Engagement between lead scientists, engineers, and stakeholders.</p> <p>Identify the appropriate location.</p> <p>Set the leasing or service agreement.</p>	<p>Use all data sets to adapt modular systems to suit the client's needs.</p> <p>Evaluate tailor-made plant leak tests, PLC, and sun panel efficacy.</p> 
Plant installation	
<p>Transport to site.</p> <p>All stability and stress tests.</p> <p>Safety, health, environmental, and quality (SHEQ) clearance for site.</p>	

Plant operation	
<p>Round-the-clock operation, remote monitoring, and data integration.</p> <p>Waste characterisation</p> 	<p>Mimics <i>in situ</i> treatment with minimal risks and cost.</p> <p>Economic and technology audit.</p>

PHASE III (Client specific)

Full-treatment adding more modules

Full-scale treatment plant
<p>Full-scale operational planning, implementation, and management.</p> <p>Add modular units to the existing treatment plant.</p> <p>Upscaling in 100 kL bioreactor modular units.</p> <p><i>In situ</i> application of technology.</p> <p>Service level agreement with iWater to manage and operate treatment.</p> <p>Integrated water management plan.</p> <p>Closure.</p> <p>Risks and liabilities removed.</p>

CONTACT DETAILS

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