

Solutions for Clean Water & Green Energy



**GLOBAL
WATER & ENERGY**

 Ekopak Sustainable Water

globalwe.com



About Global Water & Energy

Global Water & Energy (GWE) is a full solution provider to the global marketplace for industrial water and wastewater treatment, water reuse, digestion of organic solids, and production of green energy. GWE commits to creating cost-effective solutions that allow industries around the world a greener footprint and maximized energy-efficiency. As such, GWE contributes to a better and cleaner world for current and future generations.

GWE has

- A wide portfolio of technologies for industrial water and wastewater treatment and waste-to-energy applications.
- Decades of application experience and hundreds of installations.
- Experts in each field we work in.

GWE is

- An expert in diverse treatment technologies for water, wastewater, organic waste streams, and biogas.
- Adapting its solutions to specific challenges by selecting the best technology for each case.
- Providing innovative solutions and constantly developing new approaches and methods.



Our Core Industries



Food &
Beverage



Pulp &
Paper



Pharmaceutical



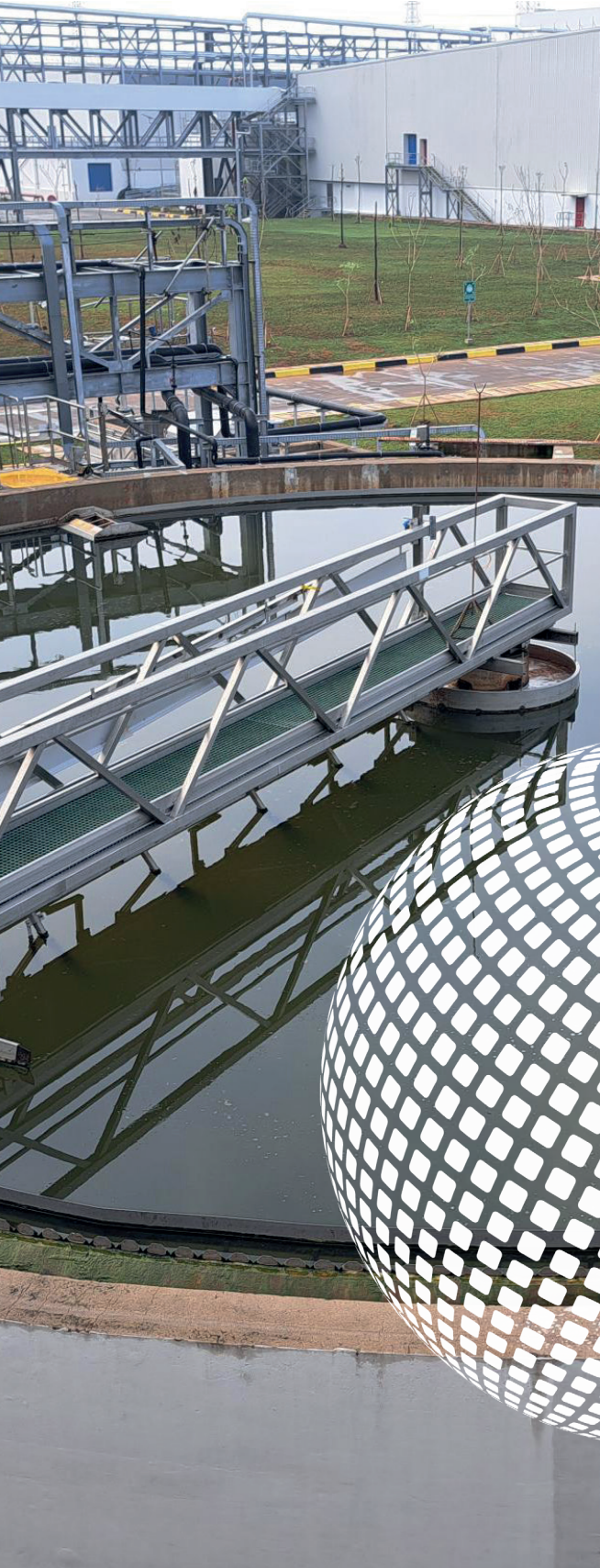
Petrochemical



Biowaste to Energy &
Energy Crops

Scope of Activities

With over 450 installations across the globe and decades of experience, Global Water & Energy provides reliable, proven technology and custom solutions to meet our clients' specific needs. We offer a broad and integrated range of activities and expertise within our field of knowledge. All these can be flexibly combined to suite the customer's specific requirements, with GWE always taking full responsibility for project management, quality, price and time schedule.



Research & Development



Via our in-house R&D engineers and collaborations with renowned universities, GWE aims to keep its leading position on water and wastewater treatment and biomass solutions.

Pilot testing & Laboratory



We can conduct water research and pilot tests directly at the customer's site. Based on the results, we determine the most suitable technologies, helping our customers maintain their competitive advantage. Our in-house laboratory in Belgium enables us to conduct extensive lab tests and water analysis.

Conception / Process Design



From the design stage onwards, we work together with the customers, always keeping a close eye on their specific requirements for optimal treatment.

Construction



GWE, through its extensive global network, can successfully deliver a package consisting of all engineering, project management and construction site services, as well as part or all electro-mechanical equipment and materials. Also a complete plant can be delivered, including local mounting, piping, cabling and civil works.

Operation & Maintenance



To maximize ongoing plant performance, GWE provides multiple levels of O&M services, ranging from process assistance and operator training via annual audits or continuous remote plant monitoring to full-scale O&M contracts.

After Sales



Through our dedicated team of wastewater specialists, located across the globe, we have a tradition of in-depth technical communication with the customers.

Clean Water for the Industry

Global Water & Energy is a full solution partner for industrial water and wastewater treatment. As illustrated in the graphic on the right, we master the entire chain and guarantee our customers an uninterrupted water supply.

Treating wastewater with high organic pollution

GWE's main expertise lies in the biological treatment of medium- and high-loaded organic wastewater by anaerobic and aerobic processes. For anaerobic wastewater treatment, GWE is one of the world market leaders with its team of experts comprising most pioneers of modern anaerobic wastewater treatment.

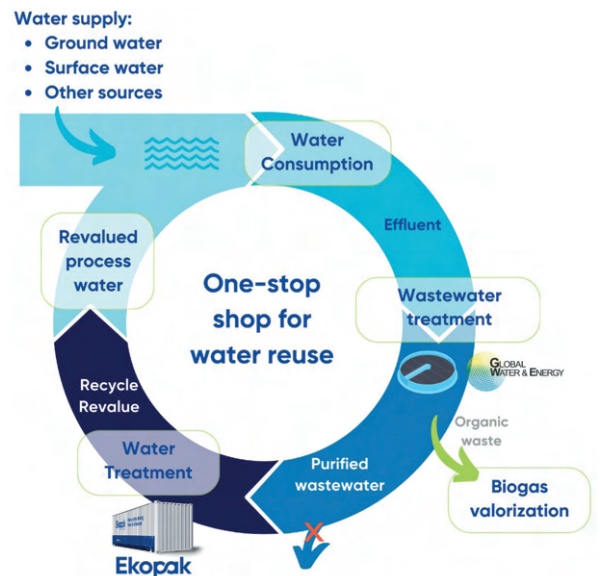
Anaerobic wastewater treatment

GWE's anaerobic wastewater treatment technologies use bacteria to digest the organic matter (Chemical Oxygen Demand or COD) in the wastewater. The technology is called anaerobic because these bacteria don't require oxygen. If necessary, for specific applications, the remaining pollution can be further treated by one of our complementing aerobic treatment systems. GWE's different proprietary anaerobic reactor types offer a truly unique range, each specifically designed for dedicated organic loads.

To learn more about our different series (ANUBIX™, FLOTAMET™, ANAFIX™, etc.) visit our website globalwe.com.

Biogas utilization from wastewater treatment for fossil fuel replacement and green power production

One of the major advantages of anaerobic wastewater treatment is the controlled continuous production of valuable biogas. The anaerobic process systems prevent large quantities of CH₄ (an important greenhouse gas) to be emitted in the atmosphere. Additionally, our solutions can also diminish or even completely replace the use of fossil fuels in the production process. For specific industry applications with high organic loads, enough biogas can be generated to fully cover a factory's energy needs and still have a biogas surplus to feed it into power generators and sell to the national grid.





Aerobic wastewater treatment

Our anaerobic treatment technologies are complemented with extensive experience in aerobic treatment processes for the further removal of organic pollutants and nitrogen. Through aerobic treatment, GWE technologies can remove up to 98% of organic pollution (COD) from the wastewater, making it suitable to be discharged in surface waters.

Such further treatment can be necessary as a final polishing step to achieve a stringent effluent quality. To remove the organic load in the wastewater, this method uses bacteria that require large amounts of oxygen. The high demand of oxygen requires the wastewater to be aerated constantly, therefore making this a far less energy-efficient wastewater treatment solution than anaerobic treatment.



Water reclamation

As water challenges grow, reuse is essential. With PURAQUA™, industries can reduce their water footprint by reclaiming purified wastewater. Through new constructions, upgrades, or retrofits, recovered water can be reused for cleaning, irrigation, cooling, or process applications.

GWE provides Ultrafiltration, Reverse Osmosis, and custom pre- and post-treatment technologies for a tailor-made water reuse system. Our water treatment installations provide complete solutions, specifically designed to meet each customer's requirements and budget.



Circular water use with WaaS®

GWE offers a specialized range of industrial water treatment solutions through its parent company Ekopak Sustainable Water. Ekopak is expert in the field of circular water use. We provide you with the best 'fit-for-purpose' solution between the recycled process water and production processes. Our water treatment installations are installed at the client's site. If you don't have the required infrastructure to do so, you can opt for our mobile 'containerized' solution. This compact solution allows for an efficient construction and setup of the installation at our headquarters in Belgium. The container is then easily transported to the customer, where minimal assembly is required.

Carefree water management with WaaS

With Water-as-a-Service (WaaS), you get an innovative water management solution tailored to your company. We offer a carefree service from A-to-Z, there is always a water supply and you do not need to employ your own staff to implement or monitor our systems. We are responsible for the financing, design, construction, operation, and maintenance of the water treatment installation. Our compact and modular water reuse system produces clean and sustainable water according to your water quality needs. With Water-as-a-Service, you only pay for the actual liters of water consumed.

Green Energy for the Industry

Organic Waste-to-Energy

With our RAPTOR® technology, green energy can be produced out of wet industrial and agricultural organic residues such as vegetable and fruit processing waste, meat and fish processing waste, tapioca and sugar beet pulp, potato waste, paper mill waste, suitable energy crops and the organic fraction of municipal solid waste (OFMSW).

RAPTOR is a novel and powerful process that converts organic "bio-waste" into biogas in much less time than conventional systems. The biogas can be used in factory steam boilers or can be treated with proprietary GWE systems for sulphur and moist removal, prior to electricity and heat production in stand-alone Combined Heat & Power (CHP) units.

Biogas valorization

Biogas has a huge potential for sustainable energy production. Valorizing your biogas into green energy will reduce your company's carbon footprint and dependency on fossil fuel sources. Some industries generate waste with high concentrations of organic contaminants and can generate a sufficient amount of biogas to cover their factory's energy needs fully.

Based on more than 30 years of practical experience with biogas use as fuel, Global Water & Energy offers burners and boiler modifications to utilize the produced biogas in single and multiple fuel arrangements.

Did you know Global Water & Energy has its own range of biogas flare systems and dual fuel burner systems?

Read more about our green energy solutions on globalwe.com



Project: Lagunitas, USA
ANUBIX™-T



Project: Cerveceria Centro Americana, Guatemala
SUPERFLOT™, SUPERSEP™, ODORIX™

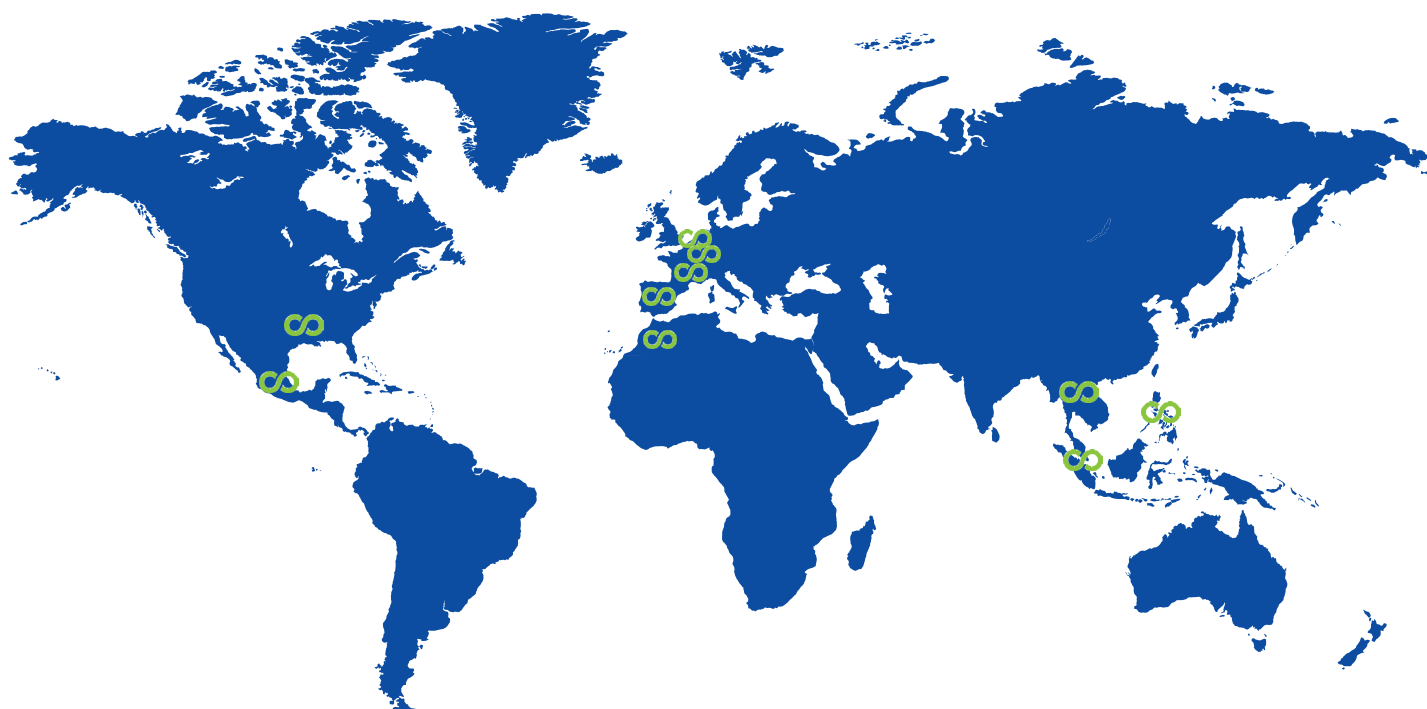


Project: Heineken Marseille, France
SULFURIX™

Because we believe water is the driving force of all nature and elementary for a sustainable future we create futureproof water treatment solutions to ensure the continuation of business processes in an ecological and economical way.

Pieter Loose, Chief Strategy & Growth Officer

Globally active, locally present



Global deployment

Global Water & Energy, member of the Ekopak Group, operates globally through local offices in several countries and through an extended network of qualified local partners. Visit our website to easily find the office or representative closest to you.

Local presence

GWE is cultivating a local footprint to address local water standards and needs. We combine our global expertise with local insights. Our regional on-the-ground teams craft tailored solutions for sustainable water and wastewater management.

Trusted by



A photograph of a water treatment facility at sunset. Large pipes run across the foreground, leading towards a series of rectangular treatment basins in the background. The sky is a warm orange from the setting sun. A large, semi-transparent circular graphic is overlaid on the left side of the image.

Together towards a sustainable future

Ekopak



Global Water & Energy

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Global Water & Energy is a full solution partner for industrial water and wastewater treatment. It is member of Ekopak Sustainable Water. Visit our website to easily find the office or representative closest to you.