Efficient water treatment is becoming increasingly important

By Matthias Kremer, Industry Manager Water & Wastewater, JUMO

With this year's motto "Save our glaciers", the
UN rightly pointed out the strong changes on our planet, which
have a direct impact on our planet's freshwater reserves.
There is enough water on earth. Of the approximately 1.4 billion km³,
but about 97.5% is distributed in the oceans as little directly usable salt water.

Only the remaining 2.5% is considered fresh water, which is responsible for the
biological life on the landmass is existentially important. Unfortunately, only 0.3% of this is accessible to us in lakes, rivers and wells, the rest is bound as ice in glaciers in the mountains, Arctic and Antarctic. In addition, hard-to-reach deep groundwater still forms part of this total.

Snow in mountains and glaciers is responsible for more than 2 billion people.
important drinking water resource of this earth or important for the

agricultural irrigation or energy production. That
Condensation feeds rivers and lakes and is
again as snow and ice.

Reserves are getting smaller

Due to climatic changes, these reserves are threatened in
future to become smaller or disappear completely. This means
urgent need for alternative supply routes for many parts of the world.

seawater desalination or the purification and direct reuse
of wastewater are possible but complex solutions. It is important that freshwater continues to be available as an affordable and accessible basis of life. The process engineering methods and plants for this exist and are constantly being further developed.

A high degree of automation and, in the future, AI that will be used by
smart sensors are fed with measurement data, the
prerequisites for the maintenance and production of high-quality and
quantitatively sufficient quantities of water.

With the JUMO sensor and automation program, we are at the forefront of the
plant engineering worldwide to master this mammoth task.
The products are used in all quality and application levels of the valuable liquid, from seawater to drinking, process or cooling water to ultrapure water of the highest quality for pharmaceutical use.

A drinking water supply project in Solapur in India, which
I know well from my practice, here is a vivid example.
The water is taken from a dammed river.
Due to the surrounding industry, the water of the river is different
heavily pre-loaded. The measurements at the input and output of the
waterworks should allow these inputs to be made available to the industry via a
longer period of time and derive measures from it,
how the water is of even better quality to the population
can be made available. Effective water treatment
can therefore put a stop to water scarcity, mitigate it.

Overall, the water supply in India is critical despite regions with strong monsoon seasons. Part of the country needs meltwater from the Hindu Kush Himalayan region. Several large rivers run through it, supplying more than 1.5 billion people in India and other riparian countries with drinking water and water for irrigation purposes in agriculture.

A lack of meltwater would be a fatal development there. JUMO participated in a symposium in Chennai in October 2024 as part of a German business delegation. Funded by the German Federal Ministry for Economic Affairs and Energy and carried out by the Indo-German Chamber of Commerce

with the participation of GWP e.V. (German Water Partnership), around ten German companies in the water sector were able to exchange ideas with local Indian politicians, scientists and water companies and develop concrete solutions.

Unfortunately, the global water crisis is here to stay

There is no question that the global water crisis will unfortunately continue to threaten us for the next few years.
years. Efficient water treatment is therefore becoming increasingly important.