

MORE THAN
8,000 KM
DISTANCE ...



... BUT A LOT OF
SIMILARITIES!



PROMOTION OF OPERATIONAL COOPERATION
BETWEEN THE MUNICIPAL WASTEWATER
COMPANIES IN BREMEN AND WINDHOEK.

WE CAN **LEARN** (FROM EACH OTHER)

“To me the most important lesson I have learnt is the intense focus on achieving efficiencies and reduction of costing of operations. This can only be (or mostly) achieved where private participation is embraced in operating Public businesses/ enterprizes. The generation of power (wind, solar and combined heat plants) is amazing and shows that it is achievable.“

Sebastian Husselmann; Chief Engineer Bulk Water & Waste Water, City of Windhoek



Sebastian Husselmann



Jörg Broll-Bickhardt

“The City of Windhoek has worked up a well thought out water cycle to cope with long periods of droughts. It is based on technical and monetary possibilities of intervention. Above all, we can benefit from their vast experience with the removal of micropollutants.”

Jörg Broll-Bickhardt, Directing Manager, hanseWasser



SIMILAR TASKS

Year 2020	WWTP Bremen-Seehausen	WWTP Gammams Watercare works	WWTP Bremen-Farge
Start of operation	1966	1963	1973
Inflow COD [ppm]	903	980	893
Inflow [m ³ /d]	118,645	26,000	15,595
Industrial sewage [%]	35	<10	<10
Effluent COD [ppm]	50	41	30
COD removal [%]	94.2	95.8	96.4

WWTP = Waste Water Treatment Plant

SPECIAL TASKS

WINDHOEK

- Preparedness for rainfall events:
 - Use of buffer tanks to retain and temporarily store the stormwater to relief the wastewater treatment plants from extreme hydraulic overloads
 - Incorporate the Namibia meteorological Services for better preparedness
- Implementation of a better repair and maintenance management plan
- Setting up of a sewer training facility
- Awareness: education of the public (e.g. pre-school kids)
- General benchmarking (staffing structures)
- Increase the direct portable reclamation capacity



SPECIAL TASKS

BREMEN

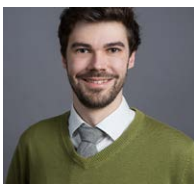
- Climate change adaption within the city of Bremen is needed in future to manage heavy rainfall events or extreme urban heat island effects. Thus, establishing a sponge city by decoupling of large sealed areas or roof greening, for instance.
www.klimaanpassung.bremen.de
- Climate change will have a negative impact on the waterbodies of Bremen. Hence, the release of treated wastewater into the river Weser may have to be reconsidered.
- Possible options for the future:
 - Use of treated wastewater for industrial purposes (further treatment needed)
 - Groundwater recharge with treated wastewater
 - Producing drinking water from wastewater through establishing new treatment steps
- Currently, we are looking into further treatment processes to achieve higher WWTP effluent qualities (i.e. removal of micropollutants).



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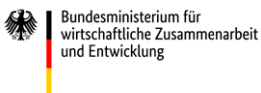


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