Wetskills-India 2017

Overview of Study Cases

Case 1: Sustainable measures against groundwater salinization in the coastal area of Gurjarat, India

Case owner: World Waternet, Tata Trust

The State of Gujarat is earnest about the implementation of Sustainable Development Goal (SDG) 6 on Clean Water and Sanitation. Unfortunately the State faces a number of water challenges, amongst which groundwater salinization in the coastal area. The problem of salinization has been acknowledged for decades, but no sustainable measures have been implemented so far. So where to start now?

World Waternet, in collaboration with Tata Trusts, has carried out a preliminary assessment and found that beside in technical measures, a lot of opportunities exist in the organizational and institutional setting of water governance in Gujarat. It is up to the team to find out how the socio-economic and environmental problems caused by groundwater salinization in the coastal area of Gujarat can be tackled, by primarily addressing possible institutional change.

Case 2: Improving industrial waste water treatment for Odhav Industrial Estate in Ahmedabad

Case owner: Odhav Enviro Projects Ltd (OEPL)

The Odhav Industrial Estate accommodates 219 small and medium scale industrial units just East of Ahmedabad. The units produce a variety of products, including pharmaceuticals and drugs, dyes, pigments, all sorts of chemicals and textiles. The businesses discharge their waste water – sometimes after pre-treating it – to a Collective Effluent Treatment Plant (CETP) and Treatment, Storage and Disposal Facility (TSDF), where the waste water is treated before it discharges through a big pipeline into the River Sabarmati. The quality of the incoming waste water differs per industrial unit and over time. This makes it difficult for the CETP/TSDF operators to guarantee a consistent after-treatment effluent quality, which at the moment sometimes exceeds the set standards for certain substances. It is up to the team to find out how Odhav Enviro Projects Ltd can improve the industrial waste water treatment process to meet water quality standards of the effluent.

Case 3: Designing a rainwater harvesting system for Silver Oak College campus

Case owner: Silver Oak College of Engineering & Technology (SOCET)

Silver Oak College of Engineering and Technology (SOCET) is a new college in Ahmedabad established in 2009, home to about 4000 students and sitting on a nice campus consisting of four major buildings with high class infrastructure. Conserving water for coming generation is high on our agenda. Clean freshwater, however, is scarce because of a high demand, pollution and a relatively low supply in arid Ahmedabad. Rainwater harvesting is a promising solution to a variety of issues faced: providing sufficient domestic supply during the dry season, replenishing groundwater storage, clogging of storm drains during heavy showers, reducing groundwater pollution and erosion, reducing cost of current supply system and saving on pumping costs of groundwater SOCET wants to reap these benefits on their campus. It is up to the teams to find out how SOCET campus can best benefit from a rainwater harvesting system.

Case 4: Bottled biogas from the Sewage Treatment

Case owner: Ahmedabad Municipal Corporation (AMC)

Ahmedabad Municipal Corporation has set up a Sewage Treatment Plant (STP) of capacity 180 million liters per day. The sewage is treated up to secondary treatment by anaerobic digesters and fine bubble diffused aeration. More than 10000 m3 of biogas is generated from anaerobic digester which is refined and bottled for further uses so as to serve the purpose of pollution prevention and revenue generation from the STP. Bottling of biogas is facilitated by a bottling unit- established nearby to the STP. One problem we face, however, is that the biogas so produced from the STP has been observed to contain excessive oxygen in it. This oxygen deteriorates the compression rate of the biogas. This issue needs to be resolved. Moreover, we ask your help in finding strategies to achieve the full potential of biogas bottling. It is up to the team to find out how AMC can resolve current issues, as well as how AMC can best benefit from our STP and biogas bottling plant?

Case 5: Floating pump for Ahmedabad urban water planning

Case owner: Darling Pumps, in cooperation with ETEC and Robusto Industrial

Ahmedabad is a fast growing city with many water challenges. Due to the limited rainfall, supplying sufficient water to agriculture, households and industries can be challenging. On the other hand, when it rains, flash floods can occur. In case of both water shortages and excess water, the innovative floating pumps by Robusto Industrial can contribute to a robust urban water strategy for Ahmedabad. But how? And where? And by whom? The floating pumps are quickly installed, no prior infrastructure is required, they are impervious to adverse operating conditions such as strong currents or foreign materials and they are durable. It is up to the team to find out how the floating pumps by Robusto Industrial can be part of the urban water management plan for Ahmedabad?"