Distilleries to source irrigation water for agriculture



Visual appearance of (1) distillery wastewater (2) post coagulation (3) post fungal treatment and (4) post ozonation

Do you know that for every liter of alcohol consumed, about 8-15 litres of wastewater is generated? Are you aware that a mind boggling 40 billion liters of waste waters are generated from distilleries in India alone? Please understand that distilleries in a way are transforming ~100 million litres of drinking water in rural areas into wastewater every day. The water, which should have been used by farmers to grow crops! There is one more dark side of these dark, dirty looking and odorous waste waters, severe contamination of receiving surface or ground waters. Don't be surprised if you are informed that this is simply stored by industry in lagoons to be discharged into open during rainy days. Can we not stop this exploitation of natural resources? Can we not convert this adversary into a resource? Yes, we can!

The favorable answer lies in the fungal bioremediation technology developed as a result of a rigorous

research over a decade by our team at the Environmental Infrastructure and Clean Technologies Laboratory (EICT Lab), IIT Bombay. Fungi species named *Aspergillus niger IITB V-8*, isolated and developed by our group, has been successfully used in Fungal Aerated Stirred Bioreactor (FASBR) upgraded now to modern Sequential Membrane Bioreactor (SMBR) with innovative adaptations such as biomass renovation and selector zone technology in conjunction with hollow fibre membrane with final polishing by ozonation to achieve nearly completed econtamination and decolourisation. Above all, they give an opportunity to reclaim water fit for use both in Industry as well as in farmland.