

**Title: Reuse & Recycle Process Water To Reduce Raw Water Consumption**



**NUTRITION**



**Horlicks**

**Hindustan Unilever Limited**

**Rajahmendravaram**

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**Region Demographics**



**Key Facts**

- **Location:** East Godavari district of Andhra Pradesh.
- Well connected by Road, Sea & Air
- **Primary Occupation :** Agriculture  
*Rice, Sugarcane, Coconut, nursery etc.*
- **Industrial development**  
*Notable Industries : ONGC, GAIL, Coca-Cola, GMR industries, International Paper Mills, GVK Industries and Ramdas Paper board*
- **Area :** 49.5 Sq Kms.
- **Population :** ~0.6 Mn
- **Water Abundant Zone**
- **Seismic :** Zone 3

**Together for Safety**

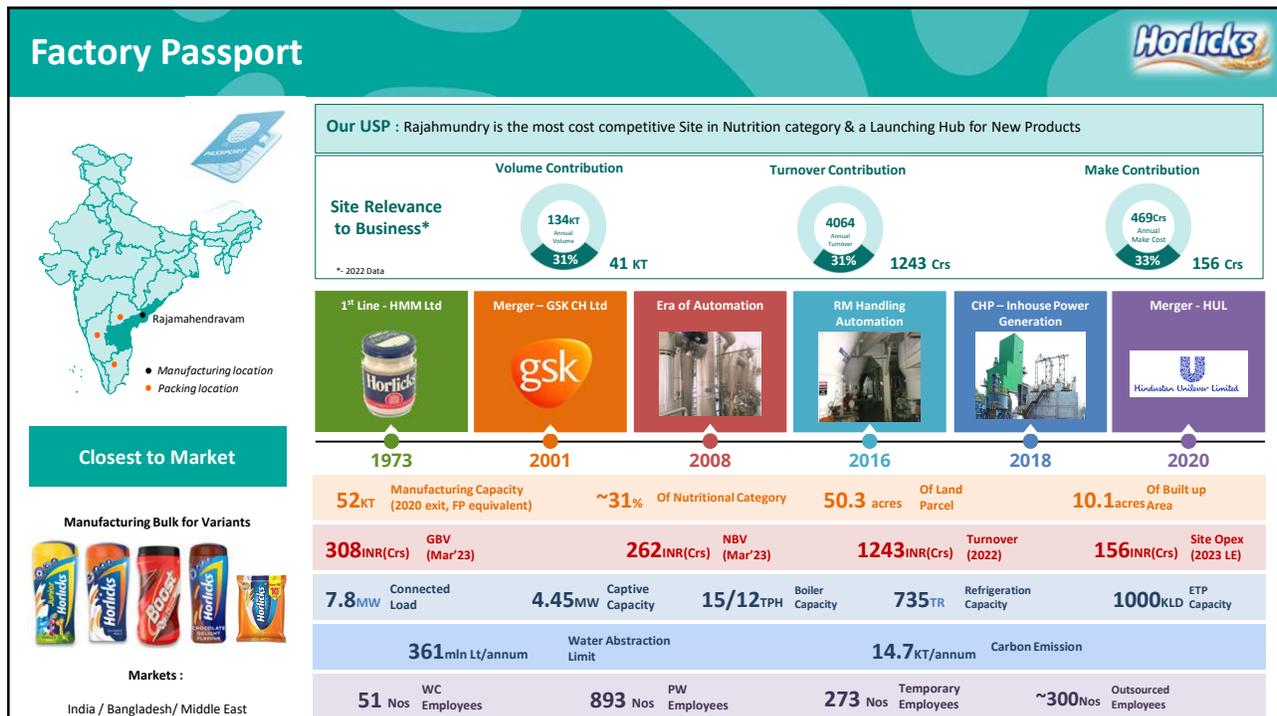
13 districts within the state



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## Reuse: Multiple Effect Evaporator Process Condensate Usage in Mash Preparation



**Trigger of the Project** - Senior management

**Uniqueness of the Project:** Process condensate which is being drained as makeup water for cooling towers was diverted back into process as an alternative for raw water

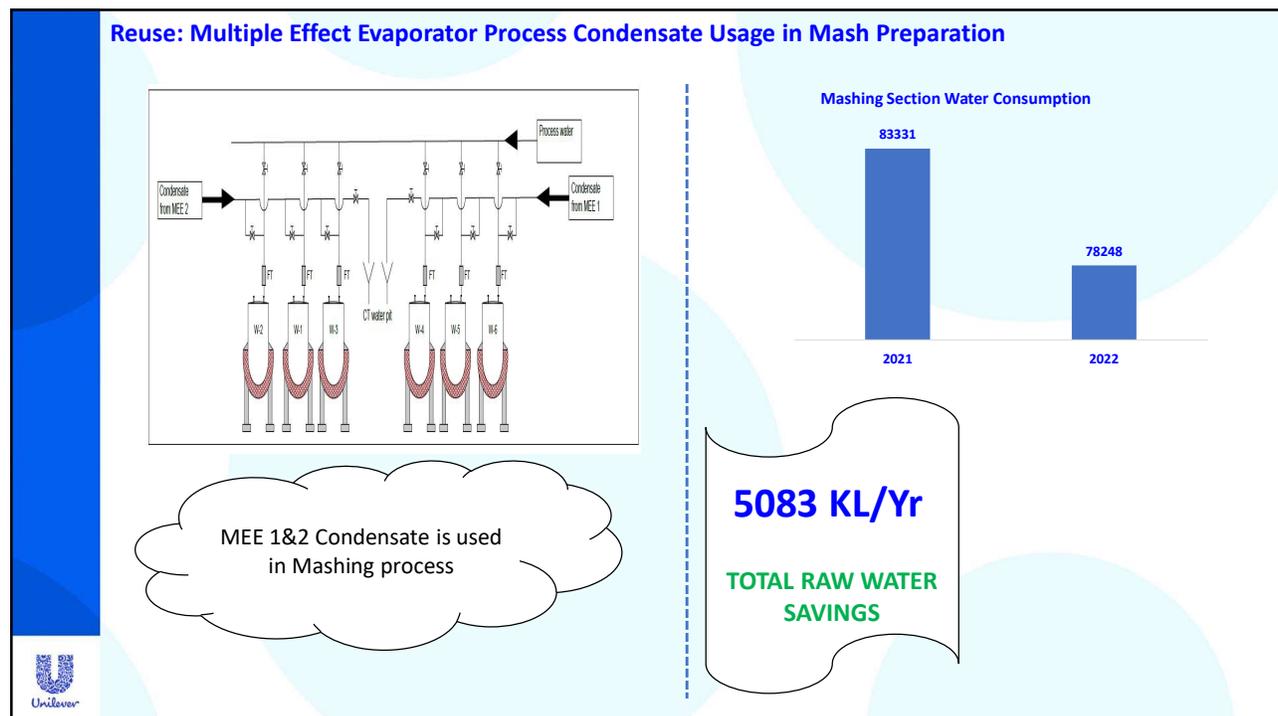
**Date of Commencement:** April 2022

**Date of Completion:** July 2022

**Major Milestones:**

- ✓ Reduced the raw water consumption by 16%
- ✓ Reduced the temperatures in process cooling towers by taking treated process water in place hot condensate liquid as makeup water
- ✓ Eye opener for organization in achieving 72000 KL of raw water per year by taking back the process condensate into mashing section from remaining stages of process, post completion of analysis w.r.t. product quality parameters

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# Recycle: TRO Expansion to use Treated Process Water for Utilities

**Trigger of the Project – Senior Management**

**Uniqueness of the Project:** Tertiary Reverse Osmosis plant expansion to increase production in terms of water filtration and ensure makeup water for process cooling towers, boilers & VAM etc., instead of raw water

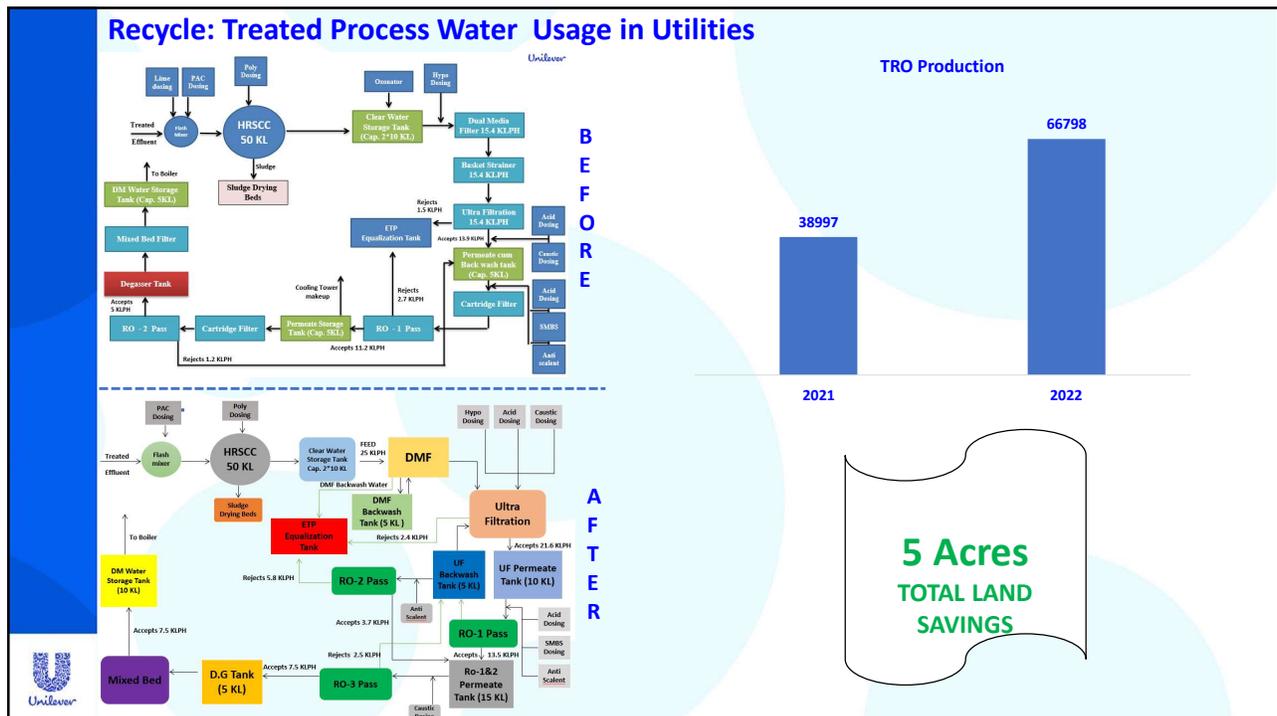
**Date of Commencement:** January 2022

**Date of Completion:** April 2022

**Major Milestones:**

- ✓ Increased usage of treated water in utilities by 41%
- ✓ Factory got the opportunity to increase production from 50 KT to 75 KT with existing raw water consent
- ✓ Factory got the opportunity to get land release from pollution control board w.r.t. existing water discharge to land rule of 10KL/Acre

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### Way Forward

- ❑ Second Effect Evaporator Condensate Usage in Mashing
- ❑ Ovens condensate usage in Mashing

**10000 KL/Year**  
**TOTAL WATER SAVINGS**



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# Thank You !!



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