

# RECP Best Practice Catalogue

*Recovery of CIP water*  
*Developed within the framework*  
*of MED TEST II*



UNITED NATIONS  
INDUSTRIAL DEVELOPMENT ORGANIZATION



The SwitchMed Programme is  
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# Best Practice - Recovery of CIP water

**SECTOR:** Food & Beverage

**SUBSECTOR:** Manufacture of dairy products

**PRODUCTS** Yoghurt, Sour Cream, Sweet Yoghurt, Pudding - Chocolate and Vanilla, Fresh Milk - ESL, Flavoured Milk (Chocolate and Vanilla), Coffee, Milkshake, UHT Milk – Full Fat and Low Fat, Buttermilk, White Cheese, Yellow Cheese, Labneh, Nectar, Juice, and Jelly

**CATEGORY** Process control or modification

**APPLICABILITY** Utilities

**COMPANY NAME** ---

**COMPANY SIZE** Employs around 250 workers in different production sections, marketing, distribution and in the dairy farms.

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## Description of the problem (Base scenario):

Benchmarking showed that KPI for company water intensity (water consumption per unit of production) is higher than the average in the dairy and milk industry as shown in the table below:

Unit	Company consumption ratio	International benchmark	Total consumption
l/kg of product	14.95	0,6 – 1,8	657,120m3/an

## Description of the solution

Water used in CIP rinsing could be recovered and used as pre-rinsing water. This can be done many times per day, in the morning before production starts , after production ends and after each stoppage of electricity supply.

Type	Unit	New Consumption ratio	Total consumption
Water consumption	l/kg Of product	8	374559 m3/an

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## Economic Benefits

Water consumption :

- Operational Saving : saving in water consumption by approximately 282,561 m<sup>3</sup>/y
- Water consumption of the CIP unit reduced by approximately 43 %

**TOTAL Saving: 267,831 EUR/an**

## Environmental Benefits

- Reduction of water consumption by 282,561m<sup>3</sup>/year
- reducing waste water generation with positive impact on the ground water

## Health and safety impact

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<b>Capital investments &amp; financial indicators</b>	<ul style="list-style-type: none"><li>• 160,000 Euro Capital investment</li><li>• Pay Back period 0,6 year</li></ul>
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<b>Suppliers</b>	Imported
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<b>Other aspects</b>	This measure leads to important positive impacts on environment as it also preserves water resources and increases water availability.
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<b>Implementation</b>	Implemented. The company reduced the water consumption as planned. Despite implemented improvements the relative water consumption is higher than the international benchmark (8 l/kg) so the company continues to study the opportunities for further improvement.
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