Ministry of Water and Environment

DEMAND-SIDE MANAGEMENT OF WATER USE IN MICRO, SMALL AND MEDIUM-SIZE ENTERPRISES (MSMES) IN UGANDA THROUGH PROMOTION OF WATER USE EFFICIENCY TECHNIQUES AND PRACTICES.

Directorate of Water Resources Management (DWRM) in partnership with Uganda Cleaner Production Centre (UCPC)

presented by Ebbu Emmanuel
# 1.0 Project Profile

<table>
<thead>
<tr>
<th><strong>Location(s) of the action:</strong></th>
<th>Uganda i.e. entire country divided into water management zones (hydrological zones)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name of the applicant</strong></td>
<td>Directorate of Water Resources Management (DWRM)-Ministry of Water and Environment</td>
</tr>
<tr>
<td><strong>Nationality of the applicant</strong></td>
<td>Ugandan</td>
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<tr>
<td><strong>Legal status</strong></td>
<td>Government body</td>
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<tr>
<td><strong>Partner(s)</strong></td>
<td>Uganda Cleaner Production Centre (UCPC), established in 2002 as Non-Profit Organization.</td>
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2.0 Project Objectives

Overall objective;
• To enhance water use efficiency and increase productivity in MSMEs in the manufacturing sector.

Specific objectives;
• To create awareness about water conservation among MSMEs.

• To facilitate adoption and optimization of water use efficient techniques and practices in order to create model MSMEs for sustainable water use in the sector.
### 3.0 Overview of implementation progress July 2015 – June 2018

<table>
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<th>Activity</th>
<th>Overall Progress (July 2015-June 2018)</th>
<th>Required Target (June 2015/18)</th>
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<td>Determination of Baseline Data</td>
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<td>4</td>
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<td>Regional training W/shops</td>
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<td>Technical support</td>
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<td>M&amp;E</td>
<td>24</td>
<td>24</td>
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4.0 Summary of water audit findings

• About 598,280m³ of water lost through: leakages, poor practices, e.t.c.
• Water metering carried out only in 15 MSMEs.
• Use of open ended pipes in factory cleaning in 23 MSMEs.
• Effluent treatment plants non-functional or poorly functioning
• Water not considered as a priority resource for monitoring in 23 MSMEs.
5.0 After project water audits.

• Closure of leakages, water recycling, recovery for reuse, technology change.
• Water meters installed in 22 MSMEs out of 24.
• Use of open ended pipes eliminated in 5 MSMEs. The 5 MSMEs have installed pressure guns.
• Improvements in structure and functionality of effluent treatment plants leading to significant reduction in pollution
• Water considered as one of the resources to monitor.
6.0 Selected case study presentation

- Water Saving Initiatives - Century Bottling Co Ltd.ppt

- Water saving Initiatives - Brookside Ltd.ppt
Impact of project implementation at Century Bottling Company (Coca Cola) Namanve Plant

- Reduced water bills from an average of USD.43,158 per month to USD. 17,632 per month.

- Reduced demand for fresh water resulting in annual savings of USD. 106,947

- On average, an investment of about $20,000 in recycling of RO reject water has resulted in a saving of $52,000 after only 4 months of project operation.
Recovery tank installed to recover cooling water and a meter installed to meter recovered water
7.0 Overall impact of project funding

- Project Grant of USD 200,000
- Annual Vol of 337,118m 3 of fresh water saved
- Annual raw material savings of USD 865,342 for MSMEs
- Annual water savings of USD 548,939 for MSMEs
- Private sector investment of USD 577,220
8.0 Challenges

• High demand from MSMEs to implement project activities yet funding could only cater for a limited number.

• Delay in implementation of high expenditure initiatives eg. Effluent Treatment Plants
9.0 Lessons learnt

i. MSMEs have high potential to increase water efficiency, thus increasing their revenue and reducing pollution loading.

ii. Through PPP, grants can trigger investment from the private sector to reduce pollution loading.

iii. PPP can increase buy in from MSMEs to implement resource efficient measures.
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