# RECP Best Practice Catalogue

*Light fixtures replacement with LED technology*

*Developed within the framework of MED TEST II*

UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

switchmed

The SwitchMed Programme is funded by the European Union

# Best practice - Light fixtures replacement with LED technology

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| SECTOR: | **Food & Beverage** |
| SUBSECTOR: | Processing and preserving of fruit and vegetables |
| PRODUCTS | Palm Dates Products |
| CATEGORY | Technology upgrade/Eco-innovation |
| APPLICABILITY | Utilities |

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| COMPANY NAME | **----** |
| COMPANY SIZE | 71 full-time workers and some 200 part-timers seasonally |

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| **Description of the problem (Base scenario):** | Existing fluorescent 400 W lamps do not provide proper light intensity in production areas. They are consuming high amount of energy (approx. 11 % of total electrical energy consumption) and they are generating high temperature that negatively effects comfort and performance of the workers. |
| **Description of the solution** | To replace old fluorescent lamps with LED technology.<br>The saving potential is 62.5% from the energy consumed by the old lighting system. |

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| **Economic Benefits** | Introduction of efficient lighting :<br>• LED lamps have guaranteed operation of over 8,000 hours, thus replacement to LED reduces the maintenance costs.<br>• Reduction of electricity consumption by 42,000 kWh/y - energy consumption will be reduced from 400 W to 150 W per bulb (while increasing quality of light).<br>• This represents reduction of the energy consumed within lighting by 62.5% and by 4% from the total consumption<br><br>**TOTAL Saving: 5,000 EUR/y** |
| **Environmental Benefits** | • Decrease of electricity consumption by 42,000 kWh/y (4%from the total consumption)<br>• Decrease the $CO_2$ emissions by 31 ton/y |
| **Health and safety impact** | • Decrease of heat produced by lighting which is negatively effecting working environment within the working rooms.<br>• Increase in lighting quality. |

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| Capital investments & financial indicators | • 7,000 Euro Capital investment.<br>• 1.3 year Pay Back period. |
| Suppliers | |
| Other aspects | This project achieves several Positive impacts like:<br>• Increases the sorting efficiency and reduces percentage of defected products due to increase in light intensity.<br>• Improved working environment for the workers, resulting from reduced heat stress in the work place<br>• Normal lifetime for LED lamps is 5 times more than conventional fluorescent lamps, thus replacement to LED reduces the maintenance costs. |
| Implementation | The company already partially changed the lighting and it is planning to change all lighting system by the end of 2018<br>Implementation of this measure is appreciated from many perspectives as in comparison with the fluorescent lighting, LED lights are bringing all benefits described above. |