



# **PR**ofitable **E**nvironmental **MA**nagement

Success Stories from Egypt, 2007



## PREMA in Egypt

Partner-Institutions	Year	No. and type of companies
ABA / InWEnt	2005/2006	4 (textiles, porcelain, hotel)
ENCPC / GTZ / UNIDO	2006	4 (food / food processing)
PIDA / InWEnt	2006/2007	5 (printing industry)
ENCPC / GTZ / UNIDO	2007	4 (textiles / garment)
ENCPC / GTZ / UNIDO	2007	4 (food / food processing)



## **Reduction of Developer Consumption in Pre-Press Process**

# Case Study: Printing Industry

- **Monitoring and comparison of all developer machines. Benchmarking**
- **Adjustment of machines with bad performance**
- **Training of workers, official competition**



- **- 50 % developer consumption**
- **7 000 Euro savings per year**
- **Reduced liquid waste and water pollution**
- **Motivated staff, appreciated training**



## Case Study: Textile Industry

**Reduction of 2<sup>nd</sup> quality products through dying failures**

- Problem: fiber dust caused dying failures
- Purchase of mobile indoor air cleaning equipment (filter)
- Training of workers



- reduction of 2<sup>nd</sup> quality products from 1% - 0.5 %
- 47 000 Euro savings per year
- Savings of all input materials
- Better working environment for workers (fiber dust reduction)



## Case Study: Food Industry

### Reduction of water losses

- **Problems: Washing water for potatoes is only used once, leaking pipe system**
- **Reuse of washing water for first wash**
- **Installation of valves and improved maintenance**
- **Training of staff on water saving**



- **146 000 m3 water reduction**
- **24 200 Euro savings per year**
- **Precious water is saved, less wastewater**
- **Motivation of workers increased**



## Summary – Cost Savings 2007

Sector	No. Of Companies	Potential Savings (Euro)	Implemented Savings (Euro)	Savings in
<b>Textile</b>	5	136 000	80 500	Second quality products Input material (textile) Water consumption
<b>Fruit &amp; Vegetable</b>	6	78 000	78 000	Water consumption Product losses Packaging
<b>Printing</b>	4	128 400	80 000	Input material (paper, ink) Water consumption Semi-products losses
<b>Total</b>	<b>15</b>	<b>342 400</b>	<b>238 500</b>	



## Conclusions I: Economic Benefits



- high saving potential in Egyptian industries
- 25 measures implemented or in implementation
- within one year more than 350 000 Euro savings
- expected annual cost savings of 3 – 4 % of prod. costs



## Conclusions II: Environmental Benefits

- high potential for low cost organisational measures to improve the workplace and housekeeping
- environmental improvements
- 280 tons CO<sub>2</sub> ... 210 tons wood fiber ... 300 000 m<sup>3</sup> water







## Organisational Benefits

- good acceptance of interactive training concept
- high individual learning curve of participants
- increased responsibility and management capacity
- better cooperation between departments





## **Lessons learnt for future PREMA programmes**

- **stronger involvement of top-management necessary**
- **further demand for change management training**
- **adaptation of PREMA in Arabic with stronger involvement of local trainers (5 local trainers)**
- **workload of participants as a challenge**
  
- **strong and committed local partner**
  - **cleaner production center**
  - **industrial associations**
- **business approach from the beginning**



## Success Factors of PREMA

- company network and follow-up meetings
- long term programme with several modules
- detailed process cost calculation highlighting savings
- strengthening capacity to change

**strong focus on implementation - not teaching**