

# “20 Million Tons: Managing the Challenge of Solid Waste”

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## The economics of solid waste management

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## \* A) WM..... Some Reminders

- What is all about???

**Shortages in resources and energy**

**Or**

**Environment and Public Health**

*\*Heavily based on: Newman, David. "Reflections on The Circular Economy".*

*Sweepnet, 4<sup>th</sup> Regional Forum, Amman, May, 2014*

# This or this.....

Copper.. Phosphate.....



Pollution & Public Health,  
Climate change.....



## What drives WM policies?

- Science
- Finance
- Principle Resource Values
- Health and Environmental Concerns

## B) Some EU Lessons.....

### I. About 40% of all waste still goes to disposal despite:

- Economic resources, i.e. taxes and incentives
- EU strategic policy planning and development since 1990's
- EPR schemes
- Feed-in tariffs for renewable energy and district heating
- Landfill taxes and bans
- EU penalties on non compliant nations
- Incentives for recycling (GPP for example)

(ps with a stable, educated and urbanized population)

## II. It is expected that by 2030 the EU will have

- eliminated landfills
- recovery of resources of 50%
- recovery of energy about 40-50%

... if current policies are sustained and enforced

Still a distance to go.....

### III. Recycling:

- 4.5 mln/t of MSW & 2.9 mln/t of industrial waste treated in 2012.
- Recycled waste sales value € 21 million of this:
  - €4 million were on the open market
  - €17 million were through the EPR National Packaging Consortium collection is subsidized by environmental taxes.

- **Barriers to effective leadership development**

- *Leadership development is not a one-time event*
- *Leadership development is not a one-size-fits-all program*
- *Leadership development is not a silver bullet*

- **Barriers to success**

- *Leadership development is not a one-time event*
- *Leadership development is not a one-size-fits-all program*
- *Leadership development is not a silver bullet*

● Waste management costs !!!! It's as simple as that:

➤ Waste management is a public health exercise

➤ Europe's example is that these costs are not covered by recycling, nor are energy sales enough.

➤ Waste taxes are needed

➤ Everyone has to pay the cost of health protection is a PUBLIC service.

## *Conclusion*

*Waste management costs money and good systems take 10-20 years to build*

## *Question...*

*Why do we think that Egyptian waste is a treasure?????... And that waste management is a profitable activity for municipalities ??????*

## C) What about Egypt.....

- **Magnitude**

Volumes increase fast (3.5% - 13 years replication period)

Waste streams are changing fast (E-waste, C&D waste...)

Urbanization is rapid

Population growth continuous (5.6% 2013)

## Socio- Economic major issues

- COED due to bad WM 6 – 11 billion LE annually
- Weak WM framework leading to confused jurisdictions for strategic planning and implementation
- Large disparities in socioeconomic and geographical conditions (one size do not fit all) the need for a decentralised approach
- Informal sector marginalized and private sector impeded
- Misconception that waste management is a profitable activity for municipalities
- Financial resources unknown or uncertain
- The financing gap between waste management service revenues and costs is wide (35%)
- Information on current waste management operations, costs and revenues is poor

(ps. with a growing, urbanized population + consumption)



• **Identify the problem** – What is the issue? What are the symptoms? What is the context?



• **Define the goal** – What do you want to achieve? What are the objectives?



• **Generate ideas** – Brainstorm solutions. Consider different perspectives.



• **Evaluate options** – Compare the pros and cons of each solution.



• **Implement the solution** – Put the chosen solution into action.

## D) What to do???

1. Clarify the jurisdictions and responsibilities
2. Understand how much money we can spend on our waste system 2014-2024 and what taxes we can levy
3. What can we do with this money ?
4. Concentrate on the basics again- forget Circular Economy, start with Linear Economy
5. Critical points are
  - a. Urban hygiene, littering, dumping, construction and demolition waste
  - b. Safe disposal in structured landfills

## Private Sector Involvement

The messages are:

- Free the potential of the private sector and allow them to take on recycling where added value exists
- Create obligations on the private sector for their own waste management, eg. construction and demolition waste and enforce them

- Start with simplified solutions in the medium term :-
  - good collection, let's keep our cities clean
  - good landfills, let's capture energy and stop air, water, soil pollution
  - selected recycling with real value streams

# Conclusions

- *Waste management costs money and every body has to pay*
- *Policies and good systems take time to implement 10-20 years*
- *Waste recycling is not going to drive waste systems without taxes and incentives like EPR or for renewable energy*
- *Keep focused on the long term, don't obsess on tomorrow- you will achieve nothing*

Thank you