ROADMAP TOWARDS ZERO WASTE AT AUB

Prepared by
AUB Waste Management Task Force
Types and quantities of waste generated at AUB and AUBMC

Municipal waste

Plastic, Paper, Tin, Glass 92.7 tons/yr

Recycling

Sukleen Servicorp
Sorting & processing

Paper & cardboard recycling industry

Metal recycling industry

Glass recycling industry

Local collector

Plastic recycling industry

2, 520 tons/yr

Organic

Inert Material

Sukleen
American University of Beirut Waste Management Initiative

Data from Existing Recycling Program Managed by PPD

- **2012**
  - Paper & Cardboard: 18,600kg

- **2013**
  - Paper & Cardboard: 19,500kg
  - Plastic: 720kg
  - Cans & Glass: 300kg

- **2014**
  - Paper & Cardboard: 24,600kg
  - Plastic: 1,241kg
  - Cans & Glass: 492kg

- **2015 till August**
  - Paper & Cardboard: 20,350kg
  - Plastic: 827kg
  - Cans & Glass: 328kg
American University of Beirut Waste Management Initiative

September 2013
Agreement with Servicorp to install 3 reverse vending machines (ReVa)

Location
Ada Dodge Cafeteria
Charles Hostler Sports Center
AUBMC cafeteria

Recyclables
Bottles
Cans & Plastic bottles

Reward system established to encourage recycling

ReVa Statistics

299,362 = kW.Hr
Recycled bottles and cans
107,770
of saved energy

This has reduced AUB’s Carbon Footprint by 11.226 tons of CO2

Total number of redeemed gifts per month (2015)

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Recycled Bottles and Cans – Monthly totals

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Legend:
- Ada Dodge Cafeteria
- AUBMC Cafeteria
- CHSC
Initiatives to Improve Recycling on Campus – RED AND BLUE

February 2015
Agreement with Sukleen to initiate the Red & Blue Campaign

Location
Phase 1: upper campus
Phase 2: lower campus and residential buildings

Recyclables
Plastic, metal, glass paper & cardboard
2613KG (September 15)

Initiatives to Improve Recycling on Campus Awareness Raising

- Teaser campaign before distributing the bins.
- One to one awareness campaigns in buildings in collaboration with Environment Club.
- Awareness raising booths with competition and giveaways at West Hall.
- Student intern moving around and raising awareness.
- Video preparation.
- Surveys to assess awareness and challenges of the program.
Types and quantities of waste generated at AUB and AUBMC

**Hazardous Waste**

- **Biohazardous waste**: 360.2 tons/yr
  - Autoclaving at Arcenciel

- **Cytotoxic waste**: 10.3 tons/yr
  - Incineration at AUBMC

- **Chemical Waste**: 4 tons/yr
  - Recycling of xylene: 0.7 tons/yr (only for AUBMC)
  - Internal recycling: 0.3 tons/yr
  - Export under Basel convention: 3 tons/yr

- **Electronic Waste**: Sold for reuse or recycling

- **Batteries & Asbestos**: 2-4 blocks/yr
  - Encapsulation
## Main Challenges

### Low rate of Recycling
- Although numbers are on the rise, we are still at 15% of what we can achieve.

### Lack of culture towards recycling
- A recent survey by Dr. Yehya with 100 students across campus regarding why they do not recycle revealed the following:
  - It is not in our culture
  - It is not urgent
  - Lack of upbringing at home and at school
  - Everybody is not recycling, so why should I?
  - I don’t feel like it
  - Number of bins is not sufficient/reward system is not adequate

### Insufficient awareness campaigns
- Campus wide awareness campaigns to motivate students, faculty and staff to reduce, reuse and recycle are absent

### Lack of ownership
- Absence of a formal Recycling Committee
- Lack of a campus wide waste reduction and recycling policy

### Inadequate number of staff for waste collection
- The number of staff available (janitors and GTS) was sufficient to collect waste from buildings and campus only without the segregated waste.
## AUB Task Force Members

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   FAS and Nature Conservation Center
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    EHSRM Department
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    EHSRM Department

**AUB should be leading by example**

“Reducing, Reusing and Recycling are not a matter of wanting or not wanting and feeling like it or not, they are a necessity.”
Approach towards zero waste

Two main approaches:

1. **Prevention**: Stopping part of waste from ending up in landfills by preventing its appearance in the first place.
   - Buying reusable cutlery and containers instead of disposable ones
   - Buying in bulk to reduce packaging
   - Greening of events

2. **Diversion or waste reduction**: Preventing the rest of university waste from reaching landfills through:
   - Reducing
   - Re-using
   - Recycling (including composting)
1. **Education**
   - Integration of zero waste concepts in the curricula, whenever possible
   - Engaging students in projects and research leading towards zero waste
   - Organizing trainings related to implementing waste reduction and greening
   - Engaging in community outreach and awareness raising

2. **Planning/Operations**
   - Conducting waste audit for all campus buildings
   - Allocating the needed resources (human and financial - minimal costs)
   - Developing communication strategies (through infographics, competitions, weekly messages, etc) and disseminating them
   - Planning and implementing “Green” conferences and events
   - Organizing waste free days
   - Developing a campus waste reduction masterplan
   - Introducing “green purchasing” and “green IT” to reduce waste generation
   - Implementing waste reduction at cafeterias – Trayless cafeterias

3. **Policy**
   - Develop and enact a policy for waste reduction and recycling that sets the principles, objectives, targets and responsibilities.
Suggested Phases

**Phase 1:** Launch a campus wide awareness campaign to reduce, reuse, and recycle (1 year) and initiate the waste audit

- **Develop awareness messages** based on an ideas competition and research and assessment of people’s perceptions concerning waste reduction and recycling.
- **Develop the sense of ownership** of the community towards waste management through the implementation of a communication strategy.
- Initiate a waste audit to assess waste quantities, composition, collection patterns, trends in buildings and departments, and final disposal.
- Develop a campus wide policy towards zero waste in parallel with the campaign.

**Phase 2:** Develop and implement a plan for waste minimization and improving recycling rate based on the results of the waste audit

- Secure needed resources for the plan implementation including financial earmarking.
- Establish a revolving fund for environmental sustainability or initiating third-party partnerships to reach the targets set.
THANK YOU!