



Improving Solid Waste Management in Hotel Industry at Aqaba

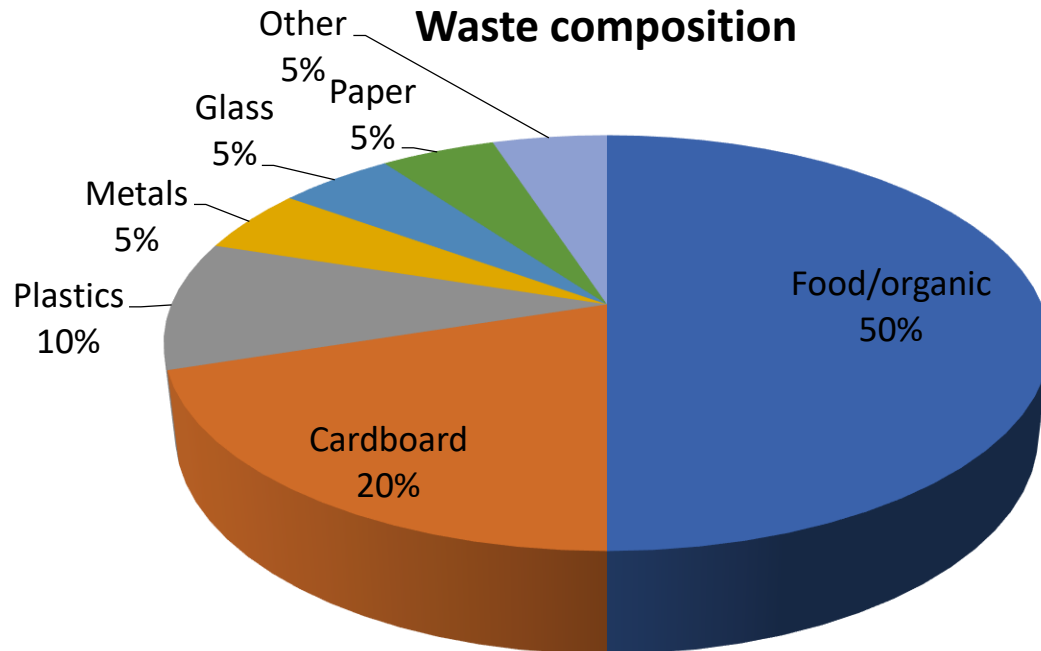
July, 10th 2017 – December, 31st 2018



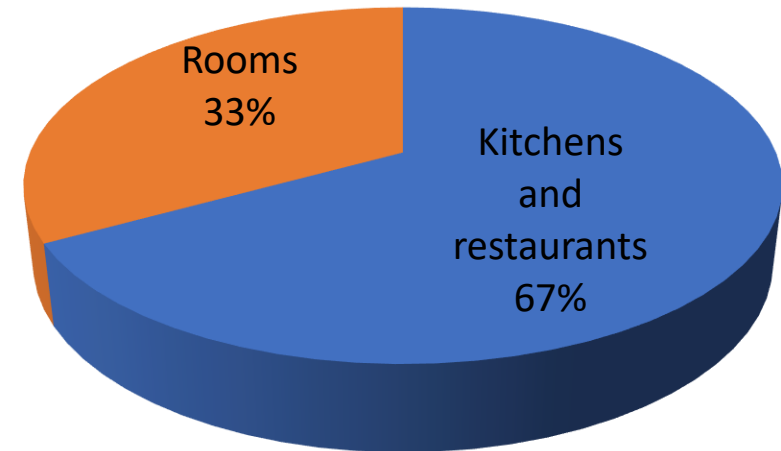
Assessment



Estimated Waste Composition - Aqaba



Source of generated solid waste in hotels



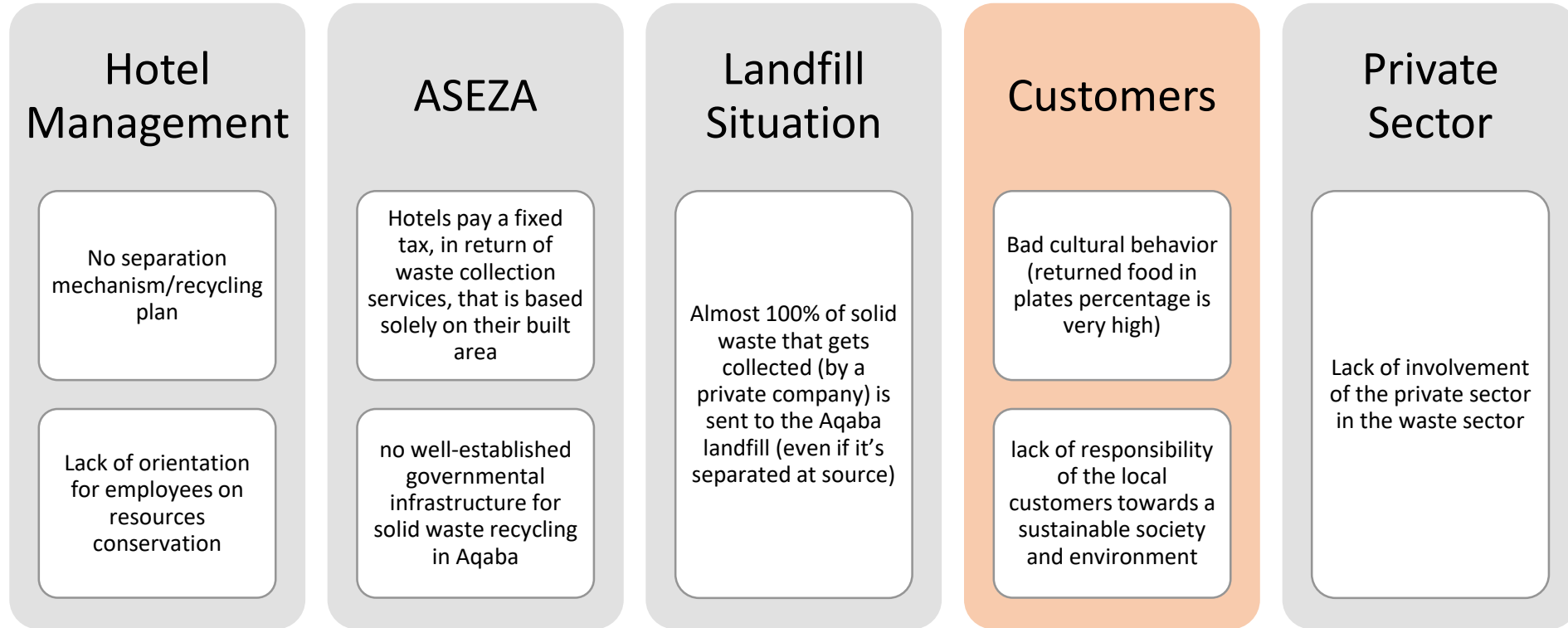
Food Waste Assessment

F.W(D.P)	F.W(Used)	Untouched	Total F.W
879.29 Kg	1172.11 Kg	464.58 Kg	2515.76 Kg


Quantities per day



Problem Identification



Proposed Solutions (Action Plan & Policy Paper)




Improve ingredient inventory

Hotels management

Attain accurate numbers of customers food consumption

Abandon the buffet and lean towards ordering from menus




Provide a recycling plan / tools

ASEZA cooperation


Cooperate with collection company to regularly collect recyclables to their final destination

Assign a central area to store and separate dry waste items



Initiate an extra charge policy on leftovers from plates.


Customers behavior



Composting facility
Centralized Composting Machine

Management plans

Anaerobic Digestion
Landfilling (Current)

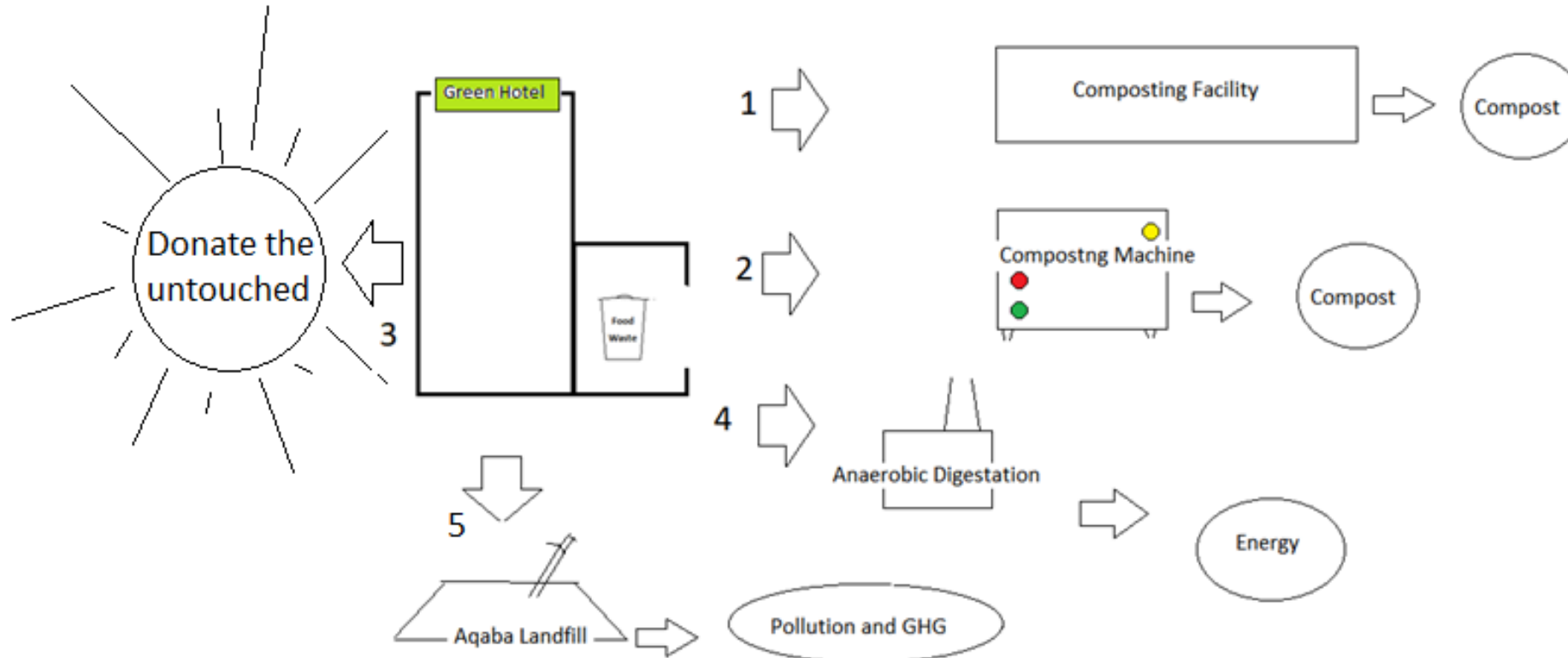


Consider changing the current waste collection scheme

Laws and Regulations



Organic/food Waste Management options



Small to medium composting facility

- process will require a vast stretch of land to accommodate the storing and curing of the compost
- A proposed location for this station would be near the Aqaba landfill to avoid any nuisance to the public community.
- This plant can serve all of the city's organic waste stream
- obvious issue regarding this option will be that of the capital and running cost



windrow composting facility

composting facilities in Jordan that are functioning properly at the moment; one in Mafrq and another in Al-Ghabawi Landfill.



Composting Machine

- able to produce compost at its primary stage in only 24 hours using up a space of a parked automobile
- Continuous monitoring of moisture content, pH, temperature
- does not require any control of leachate or pre-adjustment of the underlying ground
- issues are related to the C:N balance which can be achieved by mixing paper waste with food waste



A composting machine being fed kitchen waste

In Jordan there is only one machine that is working at the moment in the Queen Alia airport. The cost for 1ton/day machine will be approximately 100,000 JDs.



Donating the surplus food (untouched)

- Packaging and storing systems and quality assurance control are needed to insure the health risks of consuming expired food are kept to a minimum
- Some hotels are already recycling the untouched food to their employees and staff



A previous initiative in Aqaba took place during the holy month of Ramadan, and it was a successful one that occurred without any incident and with lots of donated packaged food.



Short Term Impact

- ASEZA's willingness to consider changing the current waste collection scheme.
- Setting pilot plans for hotels to reduce 30% of their generated waste.
- Empowering CBOs and contributing to their financial sustainability by giving them the tools for utilizing waste as an opportunity.
- Building the capacities of professionals and individuals from the private sector on new technologies for generating Energy from Waste.

Long Term Impact

- Waste generated from hotels reduced.
- Composting organic waste through a composting machine owned by ASEZA/private sector in collaboration with ASEZA.
- Waste collection contracts includes recycling components.
- Pilot plans for hotels replicated and used by other hotels.
- Reports to be used in future projects as references.





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Thank You!

