

WE WORK FOR THE PERSONS

The general objective of **SIRCLES** project is **to contribute to the alleviation of poverty by providing skills to women at risk of social exclusion and young people not in education**, employment or training (NEETs), whilst creating circular economy job opportunities in the field of biowaste management and composting. House of Water and Environment (HWE), as the Palestinian project partner, has been implementing the pilot project activities in Ramallah city, including separating biowaste at source in a number of restaurants, hotels, and vegetable markets, as well as operating the composting plant located in Beitello Village where the separated biowaste is transferred to produce good quality compost.



ABED

"SIRCLES has offered me an amazing experience that has equipped me with knowledge on utilizing biowaste to produce compost, while also providing me with income and enhancing the living conditions of my family."



AYMAN

Working in the composting plant is very an interesting learning experience



LOAY

It has been a life long dream to operate and manage a composting plant

Throughout the duration of the project, **38 NEETs received theoretical and practical training in biowaste management and composting.** As a result, 12 individuals were hired to work in biowaste separation, administration, education, and composting.

TECHNICAL FEATURES OF BEITELLO COMPANY PLANT

- MUNICIPALITY:** Ramallah ,Palestine
- LOCATION :** Beitello village
- PROMOTERS:** Ramallah Municipality and Beitello village Council
- INAUGURATION DATE :** December 2015
- NOMINAL TREATMENT CAPACITY :** 750 ton of biowaste per year
- TECHNOLOGY:** Open windrows and building piles
- MACHINERY :** Truck, Tractor, trolley, turner, shredder, sieving, front loader and packaging machine
- Equipment:** 181,394 EUR
- Construction:** 162,349 EUR
- AREA FINANCING :** SIRCLES project under ENI CBC MED programme

FINANCIAL DATA

TOTAL BUDGET	EU CONTRIBUTION	PROJECT CO-FINANCING
€3.8M	€3.4M	10%
PROJECT DURATION		
FEB 2021 - AUG 2023		

www.enicbmed.eu/projects/sircles @SirclesProject



SUPPORTING CIRCULAR ECONOMY OPPORTUNITIES FOR EMPLOYMENT AND SOCIAL INCLUSION

BEITELLO COMPOSTING PLANT

Spain | Greece | Palestine | Jordan | Lebanon | Tunisia | Italy

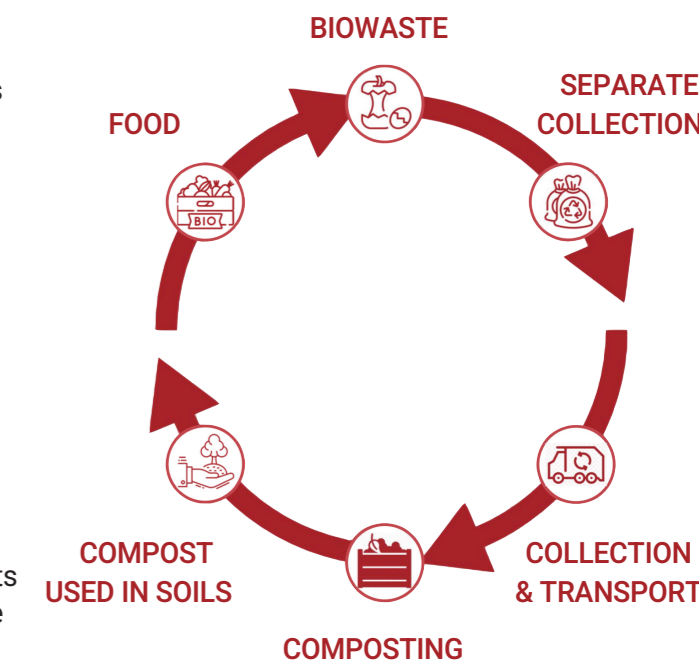


THE SIRCLES PROJECT

The **SIRCLES** project promotes social inclusion and employment opportunities for women at risk of social exclusion and young people not in education, employment, or training through a circular economy model applied to the organic waste sector. SIRCLES is financed by the European programme ENI CBC MED, has a budget of 3.8 million euros, is led by the **Waste Agency of Catalonia** and has as partners in Catalonia the **Training and Employment Labour Insertion Company**.

7 Mediterranean countries are working in the project (Spain, Greece, Palestine, Jordan, Lebanon, Tunisia and Italy) and it **will generate at least 107 new jobs**. With SIRCLES, a **composting area** has been created in Vila-seca, a facility for the self-sustainable circular economy which can generate work in the surrounding area.

The area collects biowaste from hotels and restaurants in the area with the aim of composting it. The initiative seeks to be reproducible and will also be useful to generate knowledge applicable to future policies in the area of the circular economy.





COLLECTION

The separated organic waste from the restaurants and hotels is collected with a special truck and transported to compost plant, another manually separated for the remaining inorganic impurities to ensure the quality of the organic matter. (types of plastic bags, light packaging, glass, others)



RECEPTION, SELECTION AND MIXTURE

Animal waste and biowaste are major components of the inputs. Agricultural waste used as bulking materials, after shredded by a shredder that operates on a tractor engine to reduce the particle size and increasing the homogeneity, which speeds up the decomposition process.

COMPOST

Stages of the compost production:
Five stages biowaste recycling passes through until it reaches the final product, these stages are:

Decomposition (Fermentation):

In this stage the main inlets of biowaste are arranged in the form of layers above the bulking material each at a height of 10-15 cm, in form of windrows for 4 weeks and piles for 4 weeks or to finish the fermentation process. The used width and height of the windrows are (3m) and (1.5m) respectively, the windrows turned every week with moistened as needed. At first, temperature heating to 40 °C at mesophilic phase, then can reach 70 °C in thermophilic phase.

Maturation stage:

In this stage, the biowaste is collected and transported from the decomposition stage, which has decreased half in size, to new placed in the form of a pile with a height of 1.5m and is rotated once every two weeks by a front loader, the temperature in maturation phase drops under 40°C.

Post Treatment Stage:

At this stage, the completed compost is transported to a processing area for sieving for 2 weeks, and the required humidity level is maintained. The frequency of turning depends on the climate conditions.



RETURN TO THE FIELD

Those wastes that were a burden on society and had no value turned into a material of high value and now benefit the soil and plants, improving the chemical and physical properties of the soil and adding nutrients organically.



SIEVING

This is the final stage of the treatment process; the matured and small particle compost size is being sieved and transported to the packaging machine, and the other non-sieved parts will be separated for degradable and non-degradable particles, then the degradable particles are backed to the decomposition stage to be used as bulking material.

