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Circular Cities & Smart Villages

The Milan case: prevention & management of food waste

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Recovering organic waste in cities

[...]

Since 1995, Milan, Italy has worked with large producers – such as restaurants, canteens and grocery stores – to institute in 2012, separate collection of organic solid waste from households. The collection programme now covers the city's entire population and recovers more than 130,000 tonnes of organic solid waste per year, more than any other city in the world with a population of over 1 million.

The collected material is used as input for anaerobic digestion and to generate biogas and compost (for more about this initiative, see the 'Milan' box).

MILAN: FOOD WASTE RECOVERY IN A DENSELY POPULATED EUROPEAN CITY

In 2011, Milan had an overall collection rate of separated waste of 35%, with food waste only collected from commercial sources such as restaurants and hotels. Considering this level unsatisfactory, the newly elected city government started a programme to produce biogas and compost from residential food waste separated at source and sent to an anaerobic digestion and composting facility.

By January 2015, the total separated collection rate had risen to 54%, with food waste the main contributor. Milan's scheme is distinctive: it now covers the whole population of 1.4 million, making it the largest formal kerbside organics collection scheme in the world.



An information campaign was rolled out before starting the initiative and every household received a kitchen caddy along with a roll of compostable bags made from bioplastic. Collected twice a week, the food waste is delivered to four transfer stations, from where it is transported on the same day to the anaerobic digestion and composting plant to produce biogas and compost.

Every tonne of diverted food waste represents a financial benefit: treating food waste costs about EUR 70 per tonne, while the average disposal cost for residual waste is EUR 100 per tonne. The scheme also prevents food waste from emitting GHGs in landfill sites.

Collection of MSW (including organic waste) in Milan

- Carried out by a stock option company of public property
- Door-to-door collection (no more road dumpsters), twice a week
- Pre-paid bags: modified pay-per-throw, with a start-up bonus
- Households identified through a bar code on each pre-paid bag

Main benefits of organic waste collection

- Sustainable management of landfills (reduced biogas & leachate)
- Recovery of energy (biogas) and matter (fertilizers)



L'impianto di biometano a Montello

Dai rifiuti al gas A Montello il primo impianto

322.000 tons treated in 2016!



Contribution to food surplus of the components of the food system



38,5% Production



3% Transformation



16,5% Distribution and Catering



42% Consumption



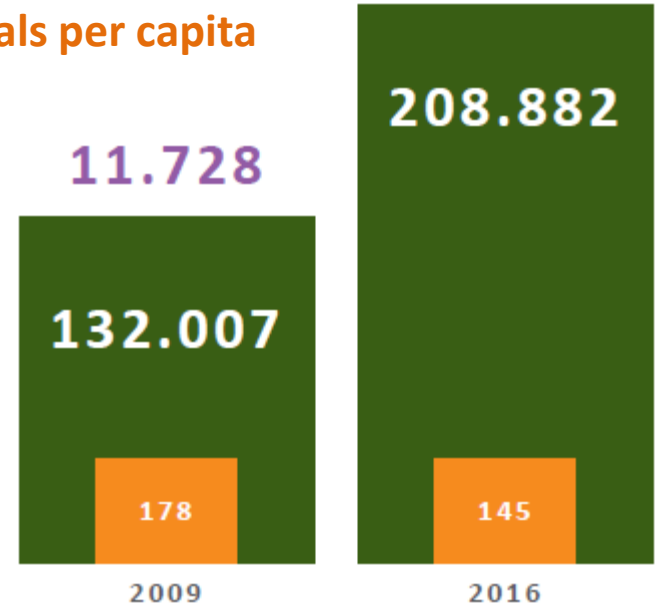
101 kg Per capita waste per year for the whole chain

58% Economic actors
42% End consumers

RECOVERY
PREVENTION

Waste food prevention:

Tons of food - Banco Alimentare
Assisted people **15.193**
Meals per capita



- Milan Food Policy

1. To ensure healthy food and sufficient drinking water as primary nourishment for everybody.
2. To promote the sustainability of the food system.
3. Understanding food.
4. Fight against waste.
5. To support and promote scientific agri- food research .

Milano



Comune di Milano

Responsible for:
FOOD WASTE



Regione Lombardia



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LWARB

London Waste and Recycling Board

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CircE strengthens the capability of partners to use policy instruments to steer the economy towards a circular model, consistent with the European Commission's Circular Economy package.

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