i-Rexfo business model

i-Rexfo is an innovative business model to reduce significantly the amount of food waste which is produced and landfilled. The actions to reduce food waste are economically sustained by public incentives, tax reductions and private revenues from the energy valorisation of residual food waste.

The project is focused on food waste produced by food industries, farms, malls, catering sector (hotels, restaurant and bar - HORECA) and consumers.

FINANCIAL FLOW

Incentives

Food Industry

Waste

Fresh

Waste Food

Mall

Campaign

Biomass from Canned/ Bottled

Incentives

TAX

Refund

TAX

Refund

TAX

Refund

TAX

Refund

HORECA

Campaign

Doggy Bags

Bins

Marketing

Company

Municipality

State

Waste

Donation

Donation

Biogas

Power Plant

Food Industry

Waste

Management

Company

Canned Food

Waste

LIFE16 ENV/IT/000547

Our partners

PRIMETIME

PARTR

BIOGÁZ

UNIGRAT

Regione Umbria

Link to other FAO projects
The i-REXFO project aims at demonstrating that food waste can be reduced through an innovative business model that is both economically and environmentally sustainable. The project focuses on food waste produced by the food industry and farms, large-scale distribution, the catering industry (hotels, restaurants, bars, HORECA), and households. It does so through measures that reduce food waste and increase waste-to-energy valorisation.

Based on the good practices in Europe (Denmark) and the UK (The Waste to Energy Food Waste Reducon Project), the i-REXFO project has developed open-source software to plan and optimise the integrated model from a technical, economic, and environmental point of view.

The i-REXFO model raises the awareness of consumers and operators in the large-scale distribution and HORECA sectors; promotes the sale and use of food that is near its expiration date, less aesthetically pleasing, and increases donations of surplus food to charities and food banks. These measures are backed by the collection and use of expired food for the production of biogas in anaerobic digestion plants, which use the resulting digestate as a fertiliser, thereby completing the cycle. The i-REXFO model will be demonstrated in Italy and then transferred to other countries (Hungary).

**WHY**

With one-quarter of the world population at risk of poverty and social exclusion, one-third of the food produced in the world gets lost or ends up in landfills. But, there’s more. The production of expired food involves the use of 250 billion m3 of water, occupies 30% of the world’s agricultural land area, and releases 3.3 billion tonnes of climate-altering gases. The direct economic consequences are summarised at the Production of Expired Food (PEF) level:

- 8.500 tonnes of CO2 emissions avoided every year
- 3.400 tonnes of food waste a year from the food industry, farms, shopping centres, and restaurants that don’t end up in landfills
- 480.000 m3 of water saved every year
- 2.800 MWh a year of energy produced from renewable sources
- 2.400 MWh in energy savings every year
- 1.100 ha a year in reduced soil consumption
- 128.000 aware consumers, thanks to the project’s campaigns and activities

**HOW**

The project focuses on food waste produced by the food industry and farms, large-scale distribution, the catering industry (hotels, restaurants, bars, HORECA), and households. It does so through measures that reduce food waste and increase waste-to-energy valorisation.

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**OUR GOAL**

i-REXFO is based on an integrated model, in which expired food to energy (EFE) valorisation supports the Reduction of Expired Food (REF) chain.

**IMPACT**

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**SHARE THE PROJECT**