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**„Holistic approach to waste management in the transition
to circular economy“**

LIFE22-GIE-BG-LIFE HA2WASTE

Grant Agreement № 101113721 — LIFE22-GIE-BG-LIFE HA2WASTE

Deliverable 2.4.

REPORT ON STUDY TOUR IN PARMA, ITALY

December 2023



PROJECT SUMMARY SHEET	
Programme	LIFE
Contract N.	101113721
Project Title	Holistic approach to waste management in the transition to circular economy
Acronym	LIFE HA2WASTE
Starting date	1 July 2023
Number of months	36
Coordinator	Municipality Pomorie, Bulgaria
Web-site	www.waste.pomorie.bg

Deliverable №	2.4
Deliverable name	Report on study tour in Parma, Italy
Dissemination level	Public
Due date	31 December 2023

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List of abbreviations

PAYT	Pay-as-you-throw
WP	Work package
WEEE	Waste from electrical and electronic equipment
ZWI	Zero Waste Italy

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1 Introduction

The document reports the methodology and the activities performed during a study tour in Parma, Italy, held under WP2, Task 2.2 of project LIFE HA2WASTE.

The overall objective of the project is to develop, implement and promote an innovative for the country holistic approach in waste management in municipality Pomorie, Bulgaria, for achieving the objectives of the EU policy and legislation on circular economy and waste by implementing good European practices, particularly the practice of municipality Parma, Italy.

Parma has introduced and successfully operates an integrated household waste management based on door-to-door waste collection and PAYT fee. Still before the development of the project the mayor of municipality Pomorie was acquainted with the good practice of Parma and established contacts with the mayor of Parma who responded very positively and welcomed the idea to share the experience of the municipality about the process of launching and implementing the new waste management system.

Within the preparatory actions in WP2, a study tour was planned to investigate in the field the practice of Parma before developing the design of the new waste management system to be introduced in Pomorie.

The study tour was held on 20-23 November 2023. The Italian project partner Zero Waste Italy played the key role in the organization of the study tour and arranged all meetings and visits in Italy. During the whole study tour, Gabriele Folli, key project expert from ZWI, accompanied the group.

2 Methodology

2.1 Objective

The objective of the study tour was to study on the ground the practice of household waste management in municipality Parma, including:

- the consistent steps and actions that the municipality has taken to introduce door-to-door waste collection, including separate collection, and setting waste fees based on generated waste,
- the positive aspects that helped and fostered the introduction of the new system,
- the problems encountered and the ways to overcoming them,
- the communication tools to engage the population,
- how the system is currently running.

2.2 Participants

Participants in the study tour included the mayor and the deputy mayor of municipality Pomorie and key experts involved in the project management and implementation from the Bulgarian project partners - municipality Pomorie, Club “Economika 2000”, Theoremus and Ecobulpack.

List of participants

Title	First name	Last name	Organization
MR	IVAN	ALEKSIEV	Municipality Pomorie
MR	YANCHO	ILIEV	Municipality Pomorie
MR	GEORGI	PETKOV	Municipality Pomorie
MS	ZLATINA	VALKOVA GEDOVA	Municipality Pomorie
MR	MARIN	TODOROV	Municipality Pomorie
MR	MIROSLAV	DINOLOV	Municipality Pomorie
MS	ANKA	ALEXIEVA	Municipality Pomorie
MS	HRISTINA	IVANOVA YANAKIEVA	Municipality Pomorie
MR	BORISLAV	TAFRADJIYSKI	Club “Economika 2000”
MS	SVETLA	YANKOVA	Club “Economika 2000”
MS	ANTOANETA	TAFRADJIYSKA	Club “Economika 2000”
MR	IVAILO	TSAKOV	Theoremus
MS	EVA	POBA	Theoremus
MS	PETYA	RADEVA	Ecobulpack
MS	TEODORA	TROPCHEVA	Ecobulpack
MR	KRASEN	KRASTEV	Ecobulpack
MS	VANYA	VANDOVA	Interpreter

2.3 Agenda

Monday 20th November 2023, Parma, Italy	
14:00	Arrival in Parma
15:00-17:00	Official welcome in municipality Parma Presentation focused on the organization of the waste collection service
17:00-18:00	Tour in the field to see waste containers/bags in the historical city centre
Tuesday 21st November 2023, Parma, Italy	
9:00-12:00	Visit to Iren plastic and paper sorting plant
12:00-13:30	Lunch
13:30-17:00	Visit to Punto Ambiente Meetings and presentations in Iren offices in Parma
21:00-22:00	Tour in the city centre to observe how the collection of waste works
Wednesday 22nd November 2023, Parma, Italy	
9:15-10:15	Visit to Eco-Station
10:15-11:15	Visit to Centro di Raccolta
11:15	Transfer to Gavassa
12:00-13:30	Lunch
13:30-16:00	Visit to Iren composting plant in Gavassa
Thursday 23rd November 2023, Capannori, Italy	
9:00-11:00	Transfer to Capannori
11:00-16:30	<ul style="list-style-type: none"> • Welcome to the Research Centre of the Municipality of Capannori, operational headquarters of Zero Waste Italy association • Presentation of the activities of Zero Waste Italy • Visit to Terra di Tutti • Visit to Centro DueVolt • Institutional meeting in Comune di Capannori • Wrap up
16:30	Transfer to Bologna
Friday 24th November 2023	
	<ul style="list-style-type: none"> • Departure to Bulgaria

3 Activities in Parma, Italy

3.1 Official welcome in municipality Parma

The study tour started with a meeting in municipality Parma.

On behalf of municipality Parma, the meeting was attended by the mayor Michele Guerra, the deputy mayor Gianluca Borghi and experts from the municipality and Iren (the company that provides the waste management services in Parma). The Bulgarian delegation was welcomed by the Mayor of Parma and the mayor of Pomorie presented shortly project LIFE HA2WASTE.



The deputy mayor of Parma made a presentation focused on the organization of the waste collection service in the city of Parma.

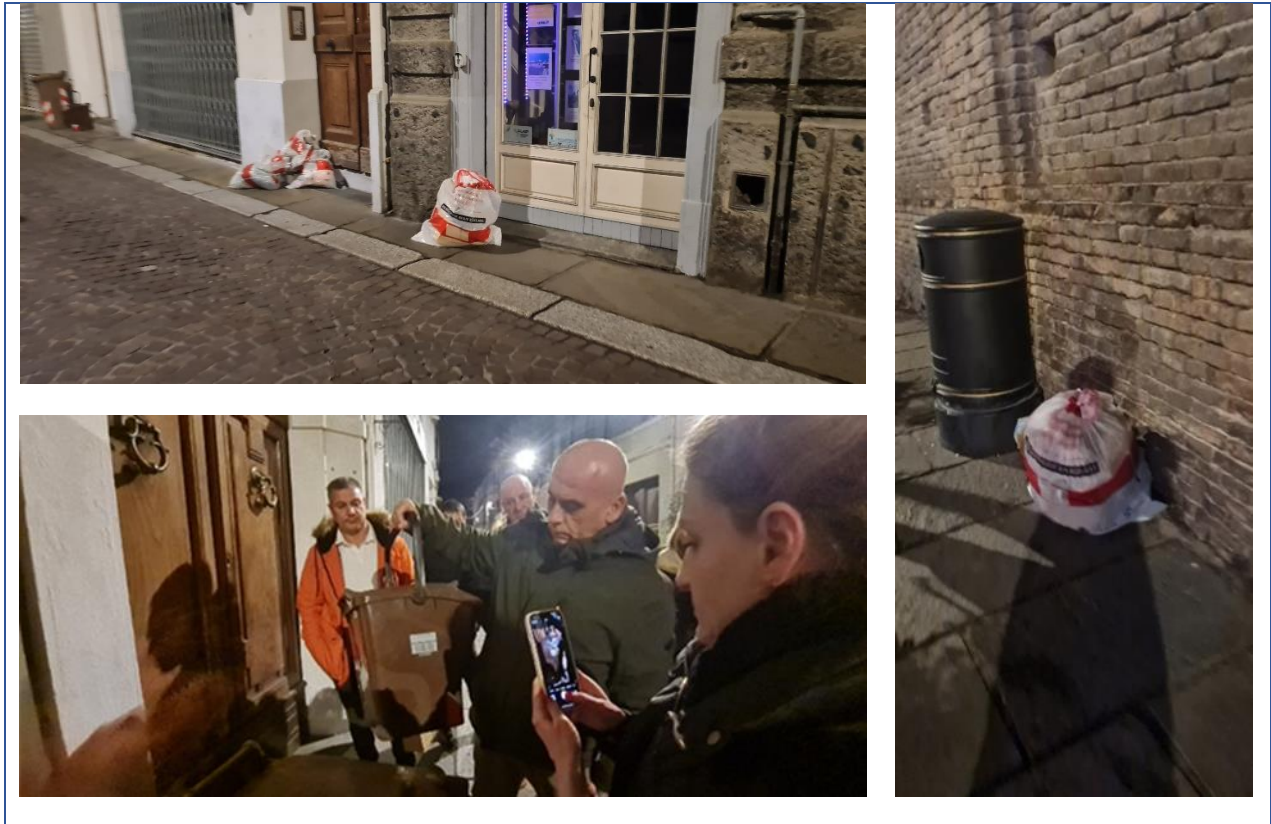


An informal discussion was held between the leaders of the two municipalities.



3.2 Tour in the field to see waste containers/bags in the historical city centre

After the meeting in the municipality the group was guided by an expert from Iren in the city centre to show the different types of waste containers and bags for domestic and non-domestic users of waste services.



3.3 Visit to Iren plastic and paper sorting plant

Iren Group is the leading multi-utility in Nord-western Italy and one of Italy's leading operators, active in electricity, gas, district heating, integrated water and environmental services management, and integrated solutions for energy efficiency. Iren is among the leaders in Italy in waste management and treatment activities and operates a complex network of plants located in served territories.

The company has a contract with municipality Parma until 2037 for providing waste management and treatment services, including collection

The plastic and paper sorting plant is part of **Integrated Environmental Centre (PAI)** in Parma, which is a set of plants designed for the disposal of non-hazardous urban and special waste in the province of Parma - Cogeneration waste-to-energy plant, Mechanical waste treatment plant, Storage and treatment of non-hazardous municipal and special waste and others, - functional to the management of an integrated system that allows the recovery of energy from non-recoverable materials and the recovery of material, minimizing the use of landfills.

The PAI covers an area of approximately 58 hectares, including a large green area with approximately 15,000 newly planted trees and shrubs, which has above all an environmental mitigation function, both in terms of greenhouse gases and dust also deriving from vehicular traffic.

The Integrated Environmental Centre model



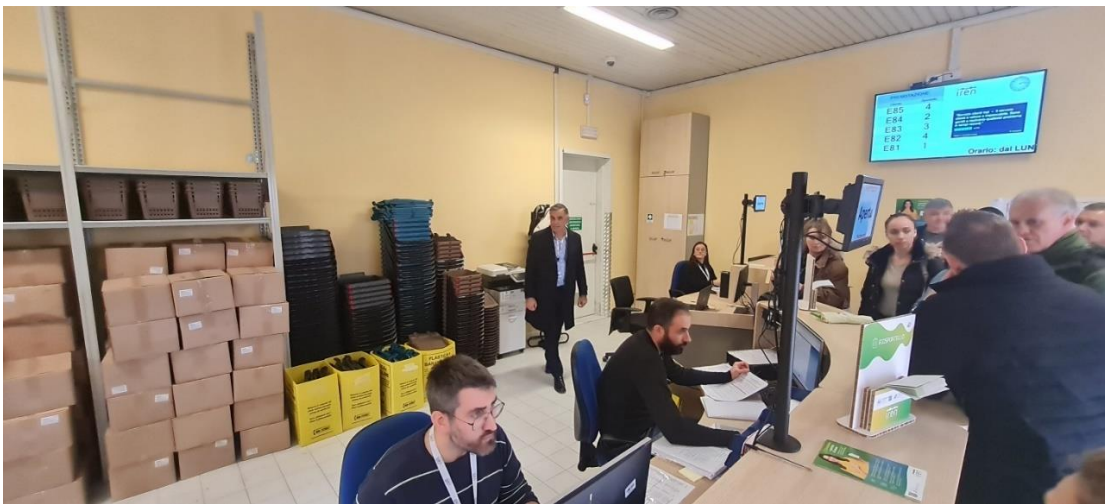
The group toured the Plastic and paper sorting plant guided by an Iren's expert who provided explanations.



3.4 Visit to Punto Ambiente

Punto Ambiente is an information tool kit distribution centre. The centre is equipped with ample parking and connected to public transport, comprises four counters to obtain information on the methods of separate waste collection, collect the consumables necessary to carry out correct waste sorting, including containers and bags, and lots of information about the waste collection calendars in the various areas of the city, the bags for plastic and cans, those for organic waste with related bins and the gray microchipped bins for residual waste in view of the activation of punctual pricing. There are also printed materials in different languages: Italian, English, French, Arabic and Chinese.

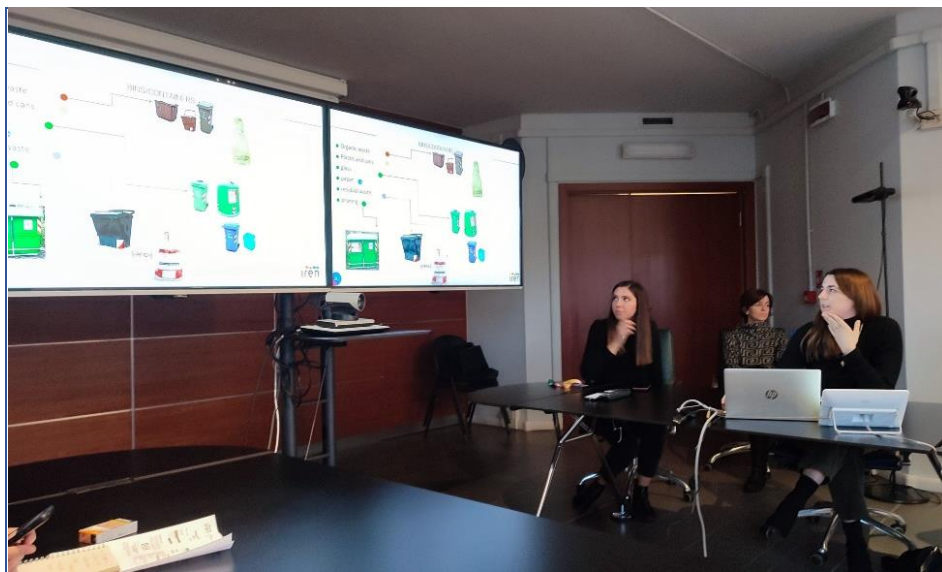
The head of the Centre gave detailed explanations of its operations - frequency of distribution and number of bags and containers given to households, the operation of the software system to monitor and manage the process, promotion and information materials, working hours and staffing, etc. The group was provided with printed brochure, leaflets and flyers.



3.5 Meetings and presentations in Iren offices in Parma

The group met with a team of Iren in a conference room in the main offices of the company in Parma. The Iren's team made several presentations, including:

- The Customer ECOService Center of Iren Ambiente and waste collection mode
- Communication activities at the start-up and now
- Illustration of the financial aspects (how the waste bill is composed, how the PAYT works, results, etc.)
- Focus on the flexibility of the system (frequency variation for restaurants in the city centre, advanced collection in dehors areas, additional services, etc.)



In addition, a demonstration was made on how the App for citizens works.



3.6 Tour to observe how the collection of waste works in the city centre (night)

The group observed the collection of residual and separated waste. Useful information was gathered on the types of garbage collection trucks for different types of waste containers and bags and the number of workers per truck.



3.7 Visit to Eco Station

There are eight ecostations and 5 mini-ecostations in Parma and the group visited one ecostation. Each ecostation is provided with 8 delivery points (2 residual, 2 plastic/can, 2 paper, 2 organic), camera to prevent abandonment and vandalism, monitoring the filling of bins remotely. For use, each user must identify himself/herself by badge or health card. The disposal is free for recyclable wastes and counted/paid for residual waste.



3.8 Visit to Centro di Raccolta

There are five centres in Parma for collection of non-dangerous waste (wood, bulky waste, metal, etc.), dangerous waste (paints, oils, batteries, acids), WEEE (TV, monitors, little household appliances, bulbs, big white, etc.).

The group visited one such Centre. Even at the time of the visit, some residents came and disposed of specific waste, by placing them in the right containers.





3.9 Visit to Iren composting plant in Gavassa



4 Activities in Capannori, Italy

The fourth day of the study tour was dedicated to visiting municipality Capannori in Tuscany, Italy, where the operational headquarters of the Italian project partner Zero Waste Italy are located.

Capannori (Commune di Capannori) is a municipality with over 30 000 residents, consisting of forty villages. Each one of the villages has its own characteristics, but what links them all is a strong sense of belonging to the territory and community. All work together to make Capannori a city of excellence. In the recent past, Capannori has put itself on the frontline of environmental protection and for more than ten years it has continuously received national and international recognition for its achievements. In 2007, Capannori became the first municipality in Italy to join the "Zero Waste" strategy and adopt zero waste goals at formal level by the city council. Since then, it has become a point of reference for waste management and the implementation of good environmental practices. For 10 years, Capannori reached 40% reduction of waste. The municipality achieved the highest separate collection rate of 86,50% by introducing the "door-to-door" collection and PAYT fee and taking numerous measures and initiatives to foster strong engagement of the residents. Transparency, public consultations with residents and training were the keys of the successes achieved.



4.1 Presentation of the activities of Zero Waste Italy

The visit in Capannori started at the Research Centre of the Municipality of Capannori, where the operational headquarters of Zero Waste Italy association are located.

The group was welcomed by Rossano Ercolini, president of ZWI, and Laura Lo Presti, coordinator of the Zero Waste municipalities and an expert in the LIFE HA2WASTE project. Mr Ercolini presented the activities and the achievement of the association.

Informally, Zero Waste Italy started as a small group of determined people led by Rossano Ercolini, which stopped the construction of an incinerator in Capannori and convinced the municipality in 2007 to commit to zero waste goals. At formal level, Zero Waste Italy was established in 2009. It has the primary task of promoting the zero waste goals among Italian municipalities, managing the network of municipalities members and connecting the Italian Zero Waste initiatives with the European and global networks of this movement. In 2004, the source separation rate in Italy was 17%. In 2019 it was 61,3%, and hundreds of municipalities have achieved more than 80% separation rates. Zero Waste Italy plays a big part of this success. It collaborates with a myriad of local groups by providing skills and training; and in particular cooperates with the Zero Waste Research Centre of the Municipality of Capannori to collect discarded objects and design new products made of waste materials.





4.2 Visit to Terra di Tutti

A guided tour was organized in the production laboratory of Terra di Tutti, located in a warehouse in Segromigno in Monte (Capannori).

Terra di Tutti is a social enterprise established in 2018. The operations consist in collecting discarded different types of waste, including wood, paper, PVC sheets, chairs, jeans and fabrics, umbrellas, etc., and transform them into new products with multiple functions and uses. The production is divided into three areas: tailoring, printing/screen printing and wood restoration. Terra di Tutti develops intercultural craft and creative reuse workshops involving migrants, social workers and artists. The organization participates in fairs and events at local, regional and national level and develops customized collections for profit and non-profit organizations.





4.3 Visit to Centro DUEVOLT

DUEVOLT centre has been inaugurated recently with the support of municipality Capannori. The centre is located in premises in Segromigno in Monte, which have been specially renovated by the municipal administration with EU funding obtained under Reusemed project.

DUEVOLT is open to all citizens and deals with collection, storage and repair of used electrical and electronic equipment, given them a new life.



4.4 Institutional meeting in municipality Capannori

Meeting with Giordano Del Chiaro, city councillor on town planning and environment was held in municipality Capannori. A discussion was held on the practice of Capannori and the actions to be taken within LIFE HA2WASTE project. The councillor shared recent municipal initiatives relating to zero waste, e.g. “FESTIVAL DEL RIUSO” (Reuse Festival), with stands, creative workshops, roundtables and music, and others.



5 Conclusions

The overall conclusion is that the study tour was very successful. All meetings and visits in the municipality of Parma, the Iren Group and in the municipality of Capannori were very well organized and involved staff were very responsive, provided detailed information and answered specific questions posed by the group.

The study tour programme was quite tight, but very beneficial for the project. The combination of lectures and presentations, site visits and demonstrations provided important statistical, technical and operational data and information that will be used in the development of the comprehensive design of the new waste management system in Pomorie and subsequently the introduction of the PAYT fee.

An analysis shall be made of all technical and organizational aspects of the collection mode applied in Parma, considering also obtained information about its evolution in the years, in order to shape an appropriate approach to be applied in Pomorie. The direct observation and detailed explanations on how ecostations operate shall be used when designing technical specifications of the two ecostations to be purchased under project LIFE HA2WASTE. The study tour furnished abundant information about methods and channels of communication with residents, as their education and engagement proved to be of paramount importance for the successful functioning of the door-to-door waste collection and the PAYT fee. Received promotional and educational printed materials shall serve as reference when designing information and educational activities and campaigns in the project.

The study tour also provided on-the-spot familiarization with other waste good practices outside the scope of the actions planned within LIFE HA2WASTE project, but helping to engage residents, expand service coverage, reuse materials and products and reduce waste. Municipality Pomorie will analyse the applicability of observed practices and shall work on tailoring to local conditions and gradually implementing some practices.