

# **Socioeconomic baseline on waste for households in Vrilissia, Greece**

**Beatriz Bringsken, Álvaro Fernández Braña,  
Catarina Sousa, Maria Kasidoni, Celia Dias-Ferreira**

**June 2020**

**Title** Socioeconomic baseline on waste for households in Vrillissia, Greece  
**Authors** Beatriz Bringsken, Álvaro Fernández Braña, Catarina Sousa, Maria Kasidoni, Celia Dias-Ferreira  
**Date** June 2020  
**ISBN** 978-989-8649-43-0



Instituto Politécnico de Coimbra – Serviços Centrais  
Rua da Misericórdia, Lagar dos Cortiços – S. Martinho do Bispo  
3045-093 Coimbra  
Telefone: +351 239 791250  
E-mail: [ipc@ipc.pt](mailto:ipc@ipc.pt)  
Internet: [www.ipc.pt](http://www.ipc.pt)

Project LIFE PAYT – Tool to reduce waste in South Europe (**LIFE 15 ENV/PT/000609**)

Co-funded by the LIFE programme of the European Commission



© 2020 LIFE PAYT. Available under the international licence Creative Commons Attribution-NonCommercial-NoDerivatives 4.0.  
(<http://creativecommons.org/licenses/by-nc-nd/4.0/>)

## Contents

1. Introduction.....	4
2. Methodology: Key Aspects and Limitations.....	6
3. Results and discussion.....	6
3.1. Economic Indicators.....	7
3.2. Social Indicators.....	10
3.2.1 Contextualizing the social indicators .....	11
3.2.2 Extra data extracted from the questionnaires.....	13
4. Conclusions .....	15
5. Annexes.....	16
Annex 1.....	16
Annex 2:.....	18

## Tables

Table 1: Set of environmental indicators for LIFE PAYT project; MSW: Municipal Solid Waste .....	5
Table 2: Results of the 12 socioeconomic indicators .....	7
Table 3 : Economic Indicators for the baseline.....	8
Table 4: Social Indicators for the baseline.....	11

## 1. Introduction

This baseline report aims to assess the impact of the project actions done within the framework of LIFE PAYT project, to establish a socioeconomic context as the starting point for the monitoring system in Vrillissia. This document, prepared in June 2020, intends to provide information for the set-up of a baseline to establish a preliminary analysis divided in twelve socioeconomic indicators (SE 1 to SE 12).

The survey to establish the social indicators had printed and electronic formats of questionnaires and was pre-tested and adjusted with colleagues and students of the project partner NTUA (National Technical University of Athens). The English and Greek versions of the questionnaires were edited to accommodate the local context, resulting in differences from the questionnaires applied in Portuguese. The interview experience during the survey showed that people were reluctant to answer more theoretical questions, especially to an issue they were not aware of. To prepare the electronic format, the amendments of the EU law for personal data were considered.

The coordinators of the project in Vrillissia collected 28 printed and 21 electronic formats questionnaires, in total 49, covering 8% of the 600 households composing a population of 1625 inhabitants in the pilot area. Questions about recycling and composting were adjusted to the existing waste management system in Greece. The local Municipal Solid Waste (MSW) system in Vrillissia has some contextual differences when compared with other LIFE PAYT projects: several charging fees without distinct matches for waste management services (e.g. waste tariff based on citizen's household size), and an existing composting system based on biowaste selection with waste bins.

Therefore, the English and Greek versions of the questionnaires were edited to accommodate these differences from the questionnaires applied in Portuguese. For instance, the Greek tariff is not based on water consumption (as in Portugal), but the service is cost-based on a measured size relation rather than an estimate based on a house surface or on the number of occupants, affecting the calculation of the indicator on MSW management revenue (SE2), on coverage of MSW management costs (SE4) and on acceptance of MSW management pricing (SE8).

As shown on Table 1, every indicator is identified by an assigned code, ranging from SE1 to SE12, and they are defined on the "Report on the development of socioeconomic indicators" (LIFEPAYT, 2017). The initial values calculated for the set-up of indicators defined in sub-action C2.1 constitute an assessment of the socioeconomic situation

regarding MSW management in target zones prior to the implementation of the LIFE PAYT project.

Table 1: Set of environmental indicators for LIFE PAYT project; MSW: Municipal Solid Waste

INDICATOR		UNITS	CALCULATION FORMULA
SE1	<b>MSW management cost for municipality</b>	€ / year	Cost in target zone per year
SE2	<b>MSW management revenue from domestic sectors</b>	€ / year	MSW tariff paid value in target zone per year
SE3	<b>Individual cost of MSW management</b>	Degree of effort (mean score between 1–5)	$\frac{\sum \text{individual scores}}{\sum \text{total answers}}$
SE4	<b>Coverage of MSW management costs</b>	%	$\frac{\text{MSW tariff revenue}}{\text{Cost of MSW management}} \cdot 100$
SE5	<b>Economic revenue due to increased recycling</b>	€ / year	$\sum_i (\text{Units of recovered MSW } i \text{ fraction} \cdot \text{Unitary price of MSW } i \text{ fraction})$
SE6	<b>Potential employment creation</b>	Nr. jobs	$\sum_i (\text{Units of recovered MSW } i \text{ fraction} \cdot \text{Nr. jobs created by unit MSW } i \text{ fraction})$
SE7	<b>Satisfaction with MSW collection system</b>	%	$\frac{\sum \text{positive answers} \cdot 100}{\sum \text{total answers}}$
SE8	<b>Acceptance of MSW management pricing</b>	%	$\frac{\sum \text{positive answers} \cdot 100}{\sum \text{total answers}}$
SE9	<b>Population percentage who separates MSW at source</b>	%	$\left(1 - \frac{\sum \text{answers "I don't recycle"}}{\sum \text{total answers}}\right) \cdot 100$
SE10	<b>Population percentage practicing home composting</b>	%	$\frac{\sum \text{positive answers} \cdot 100}{\sum \text{total answers}}$
SE11	<b>Population perception on the importance of recycling</b>	Mean score between 1–5	$\frac{\sum \text{individual scores}}{\sum \text{total answers}}$
SE12	<b>Project visibility</b>	%	$\frac{\sum \text{positive answers} \cdot 100}{\sum \text{total answers}}$

This initial assessment will be used as a baseline against which the progress achieved by the project in socioeconomic dimension will be evaluated.

## 2. Methodology: Key Aspects and Limitations

This assessment is divided in two parts: on social aspects (as the perceived attitude of the population towards the waste issue) and on economic implications (derived from MSW data of the target area). Therefore, it was necessary to use primary and secondary sources of information. As primary source, a survey was performed in the form of questionnaires answered by a sample of **48 respondents** among the non-domestic sector established as a target population affected by the project. The number of answered questionnaires gives 85% confidence interval and 10% margin of error.

The strategy followed incorporated the distribution of printed questionnaires (Annex 1.) in several PAYT communication campaign events, as well as regular dissemination events of the Municipality. These events were held at the Municipality either focusing on the PAYT project or other environmental programs of the Municipality. Questionnaires were also available at the Town Hall and Cleaning Services building of Vrillissia Municipality. This strategy resulted in 28 answered questionnaires combined with a communication campaign towards the target audience of the pilot area. The second data collection strategy was to reach a group of 21 participants through an online Google version survey focusing specifically on people of the pilot area that were in contact with the team members of the LIFE PAYT project.

As a secondary source, the values of the economic indicators (as for instance, the information related to costs and revenues) were obtained from the municipal authorities responsible for the MSW management. The information was found on official documents provided by the municipality and agencies, or other kinds of communication materials.

As a baseline process, this same survey - performed before the implementation of the project - will be conducted as well after the implementation to check the possible improvement comparing it with the initial situation.

## 3. Results and discussion

This section shows the initial values of the socioeconomic indicators, which form the baseline for the project area. The data presented on Table 2 will be used as reference in the end of the project, when the final situation in each target area will be compared with this baseline previously established.

Table 2: Results of the 12 socioeconomic indicators

INDICATOR		RESULTS Vrilissia
SE1	MSW management cost for municipality	182 637 €/year
SE2	MSW management revenue from non-domestic sectors	Not applicable
SE3	Individual cost of MSW management	Families 3.72 – Moderate effort
SE4	Coverage of MSW management costs	Not applicable
SE5	Economic revenue due to increased recycling	4 067.95 €/year
SE6	Potential employment creation due to recycling	0.62 jobs
SE7	Satisfaction with MSW collection system	62.5%
SE8	Acceptance of MSW management pricing	2%
SE9	Population percentage who separates MSW at source	100%
SE10	Population percentage practicing home composting	10.4%
SE11	Population perception on the importance of recycling	4.9 (0 to 5)
SE12	Project visibility	20.8%

### 3.1. Economic Indicators

As shown on Table 3, the economic indicators for the baseline assessment focuses on: costs, revenues, tariffs, degree of efforts, economic profits, and employment creation. These financial indicators are important for PAYT systems, since the population that correctly separates their waste expects a reduction of the tariff. In Greece, for example, the amount charged is linked to other fees without distinct matches for waste management services and the average price paid by the service is unknown by the majority.

Table 3 : Economic Indicators for the baseline

Economic Indicators	Vrillissia Baseline Summary
<b>SE1. MSW management cost for target area (2018)</b>	
$\frac{TC + LT + CC + ADM *}{\text{total mixed waste produced in tonnes}}$ $\frac{* 222\,977 \text{ €} + 551\,979 \text{ €} + 177\,600 \text{ €}}{10\,816 \text{ t}}$ $\frac{952\,556 \text{ €}}{10\,816 \text{ t}}$ <p>= 88 €/t x 563 t = 49 604 €</p> <p><b>49604 € in the target area (2018)</b></p> <p>* Values follow this order:            TC: treatment costs            LT: landfill tax for MSW            CC: collection costs            ADM: administrative costs (+HR)</p>	<p>All the mixed waste collection and treatment costs already included in the calculation were obtained from Vrillissia Municipal Council. This amount was divided by total amount of mixed waste produced in tonnes in Vrillissia. The price of 88€ per ton was multiplied by the amount of waste produced only in the target area per tonnes by estimation (563 tonnes) to calculate the MSW management cost for the target area. If after the implementation of PAYT, there is a reduction of mixed waste produced, the MSW collection costs could decrease as well, leading to a reduction in the municipality's costs.</p>
<b>SE2. MSW management revenues for domestic and non-domestic sectors</b>	
<p><b>Not applicable</b></p> <p>*This relevant MSW fee is too complex to be calculated, as it considers the surface of the property in question with a base value per square meter of 1.18 €/m<sup>2</sup>. The latter is defined by the category of use of the property based on a decision of the municipal council providing a precise, timely and fully substantiated justification for setting rates at the appropriate level.</p>	<p>This indicator was not possible to be calculated as the fees of the collection system is based on electricity suppliers, thus ensuring that the charging fee refers to:</p> <ul style="list-style-type: none"> <li>• Cleaning services for streets, squares and public spaces.</li> <li>• Waste collection and disposal (resulting in treatment or disposal sites).</li> <li>• Construction and operation of public flush lavatories.</li> <li>• Municipal lighting.</li> <li>• Other municipal service provided.</li> </ul> <p>Based on the Law 4555/2018, Article 185 regarding the concept, content, and determination of the calculating charging fees.</p>
<b>SE3. Individual cost of MSW management</b>	
<p><b>3.72 – moderate effort for non-domestic participants</b></p>	<p>This indicator aims to understand the evolution of the cost/effort bear by target population in MSW management. It is expected that throughout the project, participants will increase their time separating or composting to produce less undifferentiated waste. The 48 respondents gave a score between 1-5 for their effort in separating at source. The sum of the score divided by the total of respondents indicated the average score for their effort is 3.72 (Median = 4). After the implementation of the PAYT system, residents will have extra reasons to separate and this score is expected to be higher.</p>



Economic Indicators	Vrilissia Baseline Summary
<b>SE4. Coverage of MSW management costs (only for the area of the project)</b>	
<p style="text-align: center;"><b>Not applicable</b></p> $\frac{SE2}{SE1} \cdot 100 = xx \%$	<p>This indicator was not possible to be calculated as the indicator SE2 on the MSW management revenues of the municipality is not known based on the tariffs charged. In this case, the municipality can take advantage of the change of tariff induced by PAYT adoption to correct the lack of data and also to balance costs and revenues, as it is expected to have less mixed MSW production and increasing recycling.</p>
<b>SE5. Economic revenue due to increased recycling</b>	
$\frac{563.2x(100 - 21.3)}{100} \times 21.3 = 152.4 t$ $152.4 t \times \frac{32.1\text{€}}{1 t} = 3\,806.04 \text{€}$ <p style="text-align: center;"><b>4 892.04 €</b></p> <p><i>*Karagiannidis, Avraam (2012) Waste to Energy: Opportunities and Challenges for Developing and Transition Economies.</i></p>	<p>The purpose of this indicator is to estimate any potential economic benefit derived from PAYT due to increased recycling. The revenue from the sale of recyclable materials was estimated by Karagiannidis* (2012, p. 41) based on several material recovery factors (e.g. prices of the products in the Greek market) and established on 32.1€/t* of MSW. The most updated recycling rate for the Greek waste sector points to 17% of the waste. However, to be more specific, the recycling rate for Vrilissia Municipality was calculated. The value of 21.3% represents the percentage of recyclables relation to the total quantity of waste collected in 2018. This estimation is important to determine at the target area the quantity of recyclables separated. Considering the amount of 563 tonnes for mixed waste at the target area, 17.3% of total is 152.4 tonnes.</p> <p>To calculate this indicator, the quantity in tonnes of recyclables was multiplied by the price of 32.1€/t* of MSW, resulting in 4 892.04€ for the target area. The revenues associated to the sale of recovered packaging materials proper for recycling has a potential to increase, since it is already very low in Greece.</p>

SE6. Potential employment creation	
<p>The target zone generates 152.4 tonnes of household waste recyclables, which implies:</p> <p style="text-align: center;"><b>0.43 direct jobs</b></p>	<p>Literature review pointed that job creation is greater than the potential decrease resulting from employment loss in alternative MSW treatments (e.g. landfills) and in the production of new raw materials. According to the report “More jobs, less waste” (Friends of the Earth, 2009), estimations of potential job creation by recycling show that for every 204 tonnes of recycled waste 1 direct job is created.</p> <p>The materials in the waste collected by the Municipality within the target area with potential to be recycled were divided by specific employment creation factors (from literature), resulting in 0.43 direct jobs.</p> <p>Greece had a recycling rate of 17% for municipal waste (2016), while the EU has an average of 39%, so there is a huge gap and potential to increase recycling rates.</p>

### 3.2. Social Indicators

In Greece, there is a complex structural model of the MSW management fee and it impacts the social aspects and perceptions related to the waste management service. This fee is based on the surface of the property in question, resulting by the multiplication of its square meters by the rate of the single contributory fee. Following, the rates of the single contributory fee laid down in the decision shall be divided into general and special rates. The general rates are independent of each other, they are at least three (3) and are differentiated according to the use of each property as follows: 1st rate: real estate used exclusively for dwelling; 2nd rate: real estate used for charitable, non-profit and charitable purposes; and 3rd rate: properties used for the exercise of any kind of economic activity. In addition to the above general rates, the City Council may set special rates, as ratings of the general rates, for specific categories of property, provided that this is specifically justified by their surface area, use or the geographical area in which they are located or other particular characteristics.

In every case, when determining the general and special rates, the properties of the real estate (area, whether housed or not, time of use, etc) are taken into account, and the extent to which the property is affected by these municipal services. The general rate of the single contributory fee for dwellings is mandatory being at a lower level than the other two general rates, the maximum rate for a general or special rate cannot be set more than ten times the general rate of residence.

The fee is defined by the category of use of the property based on a decision of the municipal council providing a precise, timely and fully substantiated justification for setting rates at the appropriate level.

### 3.2.1 Contextualizing the social indicators

The before mentioned complex fee model makes it difficult for the population to evaluate some indicators, as for instance, on satisfaction with MSW collection system (SE7) and on acceptance of MSW management pricing (SE8), important for PAYT systems because the population that correctly separates their waste expects a tariff reduction.

Another point in which the project in Vrillissia represents an exception among the other LIFE PAYT projects is related to the implementation of a biowaste scheme and distribution of biowaste bins. As result, two questions from the questionnaire, 6.2 and 6.3 (see Annex 2 for Excel data) related with the organic waste had to be adjusted.

The Social indicators for the baseline assessment are shown on Table 4.

Table 4: Social Indicators for the baseline

Social Indicators	Vrillissia <b>Baseline Summary</b>
<b>SE7. Satisfaction with MSW collection system</b>	
Satisfaction with the system: <b>62.5%</b>	Based on question 8 from questionnaire, this indicator measures whether the participants are satisfied with the MSW collection service provided by the local administration. 62.5% (n=30) of the participants think that the waste collection system works well. There were 17 participants that were not satisfied with the MSW service.

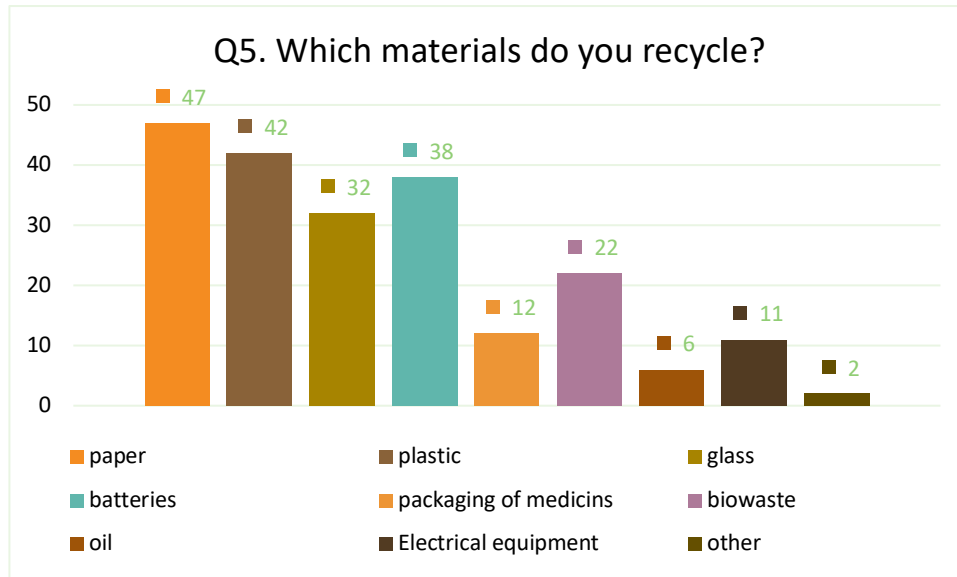
<b>SE8. Acceptance of MSW management pricing</b>	
<p>High percentage without awareness and opinion on tariff pricing</p> <p>Acceptance: <b>2% (n=1)</b></p> <p>The question was formed based on the former pattern, i.e. “Are you aware of the other charges that are attached to the charges of waste management?”. People are well aware of the charging fees related to the fee called in Greece “Fee for cleaning services and lighting” due to the name provided, but it is not clear to them that they are charged within this fee for the following:</p> <ul style="list-style-type: none"> <li>• Cleaning services for streets, squares and public spaces.</li> <li>• Waste collection and disposal (resulting in treatment or disposal sites).</li> <li>• Construction and operation of public flush lavatories.</li> <li>• Municipal lighting.</li> </ul> <p>Other municipal service provided.</p>	<p>Participants were not able to answer question 10.2 from the survey, as the pricing system based on household members and economic situation is complex, they were not informed enough about the general price system to reflect on the acceptance of the price paid for the MSW management tariff and answer the question. However, to determine this indicator a question 12 was established to evaluate the acceptance (Would you rather prefer to pay for waste management services in relation to the amount of waste you produce and not based to the existing pattern?)</p> <p>This indicator took into consideration the 48 valid answers of participants, only 1 person would rather continue with the existing tariff system. In other words, 98% evaluated the PAYT tariff as better than the current system.</p>
<b>SE9. Population percentage who separates MSW at source</b>	
<p><b>100% (any kind of separation)</b></p> <p>All the 48 participants declared that they practice at least one sort of recyclable material separation.</p>	<p>The objective of this indicator is to establish the population percentage that separates waste at source at the beginning of the project. The difference between the initial and final percentages should be considered a strong indicator of the project success, since separation at source is a fundamental parameter in the behavioural transformation of the population. However, if we disaggregate the number of materials/fractions that are separated, we have: 10.4% (n=5) practice separation of 3 different kinds of fractions; 2% for 1 fraction (n=1); and 4.1% for 2 types of fractions (n= 2); and 83.3% for up to 4 fractions (n= 40).</p>

SE10. Population percentage practicing home composting	
<p><b>10.4%</b> composting (n=5)</p> <p>In Vrilissia Municipality, there is a separate collection scheme for biowaste. They have bins for the collection of biowaste on the street.</p>	<p>Organic waste represents the largest quantity of urban waste component, so composting is a strong factor to reduce waste that needs to be raised at the beginning of the project. This indicator identifies the branch of population that already practices composting. In this sense, the 5 participants (10.4%) already practicing composting will function as a control population, establishing the base level for this indicator. The majority of 89.6% (n=43) develops no good practices for organic waste.</p>
SE11. Population perception on the importance of recycling	
<p>Likert scale with five levels:</p> <p><b>4.9</b> - Commercial</p>	<p>The perception of the importance of recycling is an indicator that points out to the household commitment for the correct destination of the waste. As 93.7% (n=45) of the respondents gave the highest scores (5) for importance of recycling, and only 6.3% (n=3) the lower score 4, the average was very close to the highest value 5.</p>
SE12. Project visibility	
<p><b>20.9%</b> of visibility (n=10)</p>	<p>During the project it is important to evaluate the knowledge of the population regarding LIFE PAYT visibility to verify if the project's dissemination activities achieve their goals. Awareness raising is a key element for effective PAYT implementation. The majority of 79.1% (n=38) of the respondents heard about the project for the first time during the survey. Out of the 10 respondents aware in advance of the project, one of them was informed during participation in an event (Information day from Vrilissia Municipality). While all the other nine ones got to know the project through the Internet and Leaflets.</p>

### 3.2.2 Extra data extracted from the questionnaires

This section presents the data results from the questionnaire (see Annex 1) that were not mentioned during the previous indicators analysis.

- Question 1: On average, a participant throws away 5.2 bags per week, a total of 157.5 litres of waste.
- Question 5: The most separated material is Paper and Cardboard - as 98% separates.



- Question 9: 62.5% are satisfied with the MSW collection system, but when asked what could be improved in the MSW system, there were 31 complaints concerning: a lack of information (6), increase the number or variety of bins (16), requesting a new collection system (7), and asking for another type of composting program (2).

Nº of answers	Categories of answers
6	1 - Sensibilization/information/penalty
16	2 - Other types of bins/more bins/biowaste bins
7	3 - New/More collection system
2	4 - Composting program

- Question 10.1: 93% (n=45) were not aware of the amount paid for the municipal waste tariff, only 3 people were informed. These 3 positive respondents were also asked to inform the regular price paid for the tariff, the amount informed was €20, €3, and €2 (Q10.1.1).
- Question 11: 85% (n=41) were not informed that the waste tariff is based on household waste management in relation to household members and economic situation.
- Question 13: 41.6% (n=20) were aware of being charged for every ton of waste that is landfilled, while there is no charge corresponding for the recyclables treated. 28 participants were not well informed about this free service.
- Question 14: 89.5% (n=43) thinks that households that separate waste should be favoured, the other (n=5) ones think the benefit is not necessary.

## 4. Conclusions



This baseline analysis had to overcome several contextual obstacles as the MSW system in Greece has a complex criteria to establish the tariff and also a lack of some centralized actors in the waste sector (as the Green Dot association) to compile information regarding the sector. Another obstacle was that the number of participants among the household sector was low, even with the online survey.

It was not possible to obtain the results of two indicators (SE 2 and 4) since it was a challenge to obtain the data regarding the revenues for the MSW management service, as the fee englobes several other municipal services. Regarding the questionnaire, it was necessary to make broad adjustments on the questions regarding biowaste and the tariffs to have objectives aligned with results.

The positive aspect of the household waste sector in Vrillissia is that separation of packaging can increase, although 100% of participants seemed to be committed to this good practice. The satisfaction with the MSW system seems to be mid-level or neutral, but there is a huge lack of information about the current tariff.

## 5. Annexes

## Annex 1 Model of the questionnaire issued for the Vrillissia survey

	Survey for evaluation of socio-economic indicators of LIFE PAYT project		
	<b>RESIDENTIAL AREAS</b>	Date: _____	

**Previous Information:** The LIFE PAYT Project, in collaboration with the Municipality and the National Technical University of Athens, will take place in Vrillissia. Pioneering the reduction of MSW generated by activities of this neighbourhood, the project pretends to primarily increase the rate of separated collection of recyclable packaging materials.

Your opinion is very important to us! That is why we would like to ask you some brief questions, which will take only a few minutes. We ensure anonymity and confidentiality of your answers, which will be scientifically analysed along with that of other participants, without any identification of the participants in the study.

**WASTE AND RECYCLING**

1. How many household waste bags do you/your family generate per week? \_\_\_\_\_ bags  
(typical supermarket bag, small 15L/ big 30L)



2. Who takes usually garbage to the street bin at your home? \_\_\_\_\_

3. From 1 to 5, how much do you agree with this? "Waste management is a shared responsibility to which I am, as a citizen, also responsible". (1 means "disagree at all" and 5 means "agree at all")	1	2	3	4	5
---	---	---	---	---	---

4. From 1 to 5, How important is recycling for you? (1 – nothing important and 5 very important)	1	2	3	4	5
---	---	---	---	---	---

5. Which materials do you recycle? (mark with X)	6. Regarding <u>biowaste</u> :				
Paper and Cardboard		6.1. Do you use the existing kurbside biowaste sorting scheme (brown kurbside biowaste collection bins)		Yes	No
Plastic and metal packaging		6.2. If you use the brown kurbside biowaste collection bins, how many biodegradable bags do you use per week?			
Glass		6.3. Do you practice home composting?			
Biowaste and green waste					
Electric and electronic equipment					
Batteries					
Cooking oil					
Medicaments		6.4. If composters were offered, would you be interested?		Yes	No
Other					
I do not recycle at all					
7. From 1 to 5, where 1 means "no effort" and 5 "too much effort", how much effort your family does in household waste management? (do separation and deposit in the containers for recycling, composting, ...)	1	2	3	4	5

**WASTE MANAGEMENT SYSTEM**

8. Is the current waste collection system working properly?	Yes	No
9. Is there anything you would like to change in the current collection service?	_____	

**WASTE TARIFF**

10. Are you aware that there is an existing municipal tariff charge system for supporting waste management?	Yes	No	
10.1. Do you know how much you pay for your household waste management?	Yes	No	How much? _____ (€/month)
10.2. Do you think the tariff is fair?	No opinion	Yes	No



12. Would you rather prefer to pay for waste management services in relation to the amount of waste you produce and not based to the existing pattern?	Yes	No
13. Do you know that you are charged for every ton of waste that is landfilled, while there is no charge corresponding for the recyclables treated?	Yes	No
14. Do you think that households separating their waste at source should be favoured?	Yes	No

#### LIFE PAYT PROJECT

15. Have you ever heard about LIFE PAYT project?	Yes	No			
15.1. If yes, how?	Press	Poster	Flyer	Sticker on container	Internet
Other: which? _____					

Just finishing, we would like you to give us some personal data for sociological assessment of the study. These data will only be used to internal control by staff of project, and will not be supplied to any other external entity, neither identifying nor using names of individuals, only aggregated data from all enquired persons. Nevertheless, if you prefer feel free to not answering any question. However, we kindly ask you to give us a contact (telephone number) just in case this enquiry is randomly selected for quality control and your participation in this study is validated.

A. Data of enquired person and household		B. Housing type (mark with X)			
Household member	Age/ Gender (M/F)	Apartment		With yard	
1)					
2)					
3)					
4)					
5)					
6)					
7)					
8)					

Name of enquired person:	Address:	Email:	Contact (required):

**ACKNOWLEDGMENT: THANK YOU VERY MUCH FOR YOUR COLLABORATION!**

**OBSERVATION:**

## Annex 2: Excel with the data collected from the questionnaires

	1. How many supermarket bags (30L) for garbage do you use per week?	
Average		5,25
	2. Who takes usually garbage to the street bin at your home?	
mother/wife		16
father/husband		14
Myself/all non identified		18
	3. From 1 to 5, how much do you agree with this? "Waste management is a shared responsibility to which I am, as a citizen, also responsible".	
Average Likert		4,85
	5	41
	4	7
3,2,1		0
	4. From 1 to 5, How important is recycling for you?	
Average Likert		4,93
Nº 5		45
Nº 4		3
	5. Which materials do you recycle?	
paper		47
plastic		42
glass		32
batteries		38
packaging of medicins		12
biowaste		22
oil		6
Electrical equipment		11
other		2
	6.1. Do you use the existing biowaste scheme (biowaste bins)	
No		21
Yes		27
	6.2. If you use the brown kurbside biowaste bollection bins, how many biodegradable bags do you use per week?	
		3,88
	6.3 Do you practice home composting?	
No (89,6%)		43
Yes (10,4%)		5
	6.4. If composters were offered, would you be interested?	
Yes		41
No		7
	7. From 1 to 5, how much effort your family does in household waste management?	
Average		3,72
Median		4
	8. Is the current waste collection system working properly?	
Yes		30
No		17
	9. Is there anything you wold like to change in the current collection service?	
Yes		31
No		11
	10. Are you aware that there is an existing municipal tariff charge system for supporting waste management?	
No		44
Yes		4
	10.1. Do you know how much are you paying for your household waste management?	
Yes		3
No		45

	11. Do you know that you are paying household waste management in relation to household members and economic situation?	
Yes		7
No		41
	12. Would you rather prefer to pay in relation to the amount of waste you produce instead household members and economic situation?	
Yes		47
No		1
	13. Do you know that you are charged for every ton of waste landfilled, while there is no charge corresponding for the recyclables treated?	
Yes		20
No		28
	14. Do you think that households separating their waste at source should be favoured?	
Yes		43
No		5
	15. Have you ever heard about LIFE PAYT project?	
Yes		10
No		38
	15.1. If yes, how?	
Leaflets		3
Website		3
Leaflets/Website		3
Information day from Vrillissia M		1



## Tool to reduce waste in South Europe

Co-funded by the LIFE programme of the European Union  
LIFE15 ENV/PT/000609

