

## Indicators for environmental evaluation of LIFE-PAYT Project

INDICATOR		DESCRIPTION
E1	<b>Annual production of unsorted MSW</b>	Amount (kg) of unsorted MSW produced by every waste producer (household or non-domestic waste producer) in the target areas during one year. This amount should be reduced thanks to the economic incentive introduced through PAYT.
E2	<b>Annual production of source-separated MSW</b>	Total amount (kg) collected of every of the source-separated waste streams (of dry packaging materials): paper & cardboard, plastics & metals and glass. This indicator reflects the expected increase in the separate collection of dry recyclables.
E3	<b>Annual production of MSW</b>	Total amount collected of MSW from the target areas by every waste producer (unsorted MSW + source separated MSW). It is expected that the implementation of PAYT will encourage the citizens to modify their consuming patterns towards waste prevention, at least in some extent (for instance: buying products with less packaging).
E4	<b>Percentage of source separation</b>	% of source separated MSW regarding the total amount of generated MSW, in order to assess the increase in the recycling rate.
E5	<b>Recyclable materials in unsorted MSW</b>	Amount (% weight) of recyclable materials still contained in unsorted MSW (instead of being separated at source). This indicator should allow to verify changes on the waste composition derived from PAYT application (less recyclable materials in unsorted MSW are expected).
E6	<b>Separation percentage of single recyclable materials</b>	Percentage of source separation for every of the waste streams of dry recyclable materials (referred to the total amount of that particular waste stream). The purpose is to calculate the efficacy of recovery for a specific waste stream. For instance, the separation level of glass is typically rather satisfactory when compared to that of plastics.
E7	<b>Organic waste home-composted</b>	Parallel to the introduction of PAYT tariff, the possibility of home-composting will be offered to some households as an alternative for reducing the amount of unsorted MSW. Similar to indicator E6 for dry recyclables, the purpose is to assess how much organic waste (%) is prevented in this way.
E8	<b>Substituted raw materials due to recycling</b>	The increased recycled amounts (kg) of materials represent a net positive effect on the environment from the PAYT application (through the reduced consumption of raw materials).
E9	<b>MSW sent to landfill (%)</b>	An expected effect of PAYT application is the reduction of waste amount which is sent to landfill (the last option to consider among the waste management hierarchy), thanks to improved source separation.
E10	<b>Energy consumption associated to MSW management</b>	From the characterisation of the energy consumption along the waste management stages (collection+treatment+disposal), this indicator checks if the adoption of PAYT has any effect on the energy consumption of waste management, expressed as tonnes of oil equivalent (toe).
E11	<b>Greenhouse effect emissions related to waste management</b>	Characterisation of the emissions in the collection and treatment processes. Similar to E10, now referring to the greenhouse effect emissions, expressed as kg of CO <sub>2</sub> equivalent.