



POLYMER WASTES IN ASPHALT MIXES: A WAY TO INCREASE SUSTAINABILITY OF ROADS INFRASTRUCTURES

PROJECT LOCATION: Cantabria, Madrid and Valencia

BUDGET INFO:

Total amount: 1.535.225 €

% EC Co-funding: 760.091 €

DURATION: Start: 01/09/11 - End: 31/03/15

PROJECT'S IMPLEMENTORS:

Coordinating Beneficiary: ✦ University of Cantabria

Associated Beneficiary(ies):

- ✦ Acciona Infraestructuras
- ✦ Asociación de Investigación de Materiales, Plásticos y Conexas
- ✦ Dirección General de Carreteras de la Comunidad de Madrid





BACKGROUND and AIMS:

Nowadays, Polymers are recycled at rates of only a few percent in most countries, so they are rapidly accumulating in unproductive and virtually permanent landfills. This kind of wastes has a huge impact on the environment.

The **aim of POLYMIX** Project is the demonstration of new environmental friendly asphalt mixes, using polymer wastes for modifying mixes. By this way environmental problems associated to polymer wastes will be reduced, permitting new alternatives for its reuse.

Polymix has been conceived with the aim of achieving a wide replication at European Level. Another important goal of this project is the definition of the POLYMIX solutions into Green Procurement Public Procedures.

ENVIRONMENTAL PROBLEMS TARGETED:

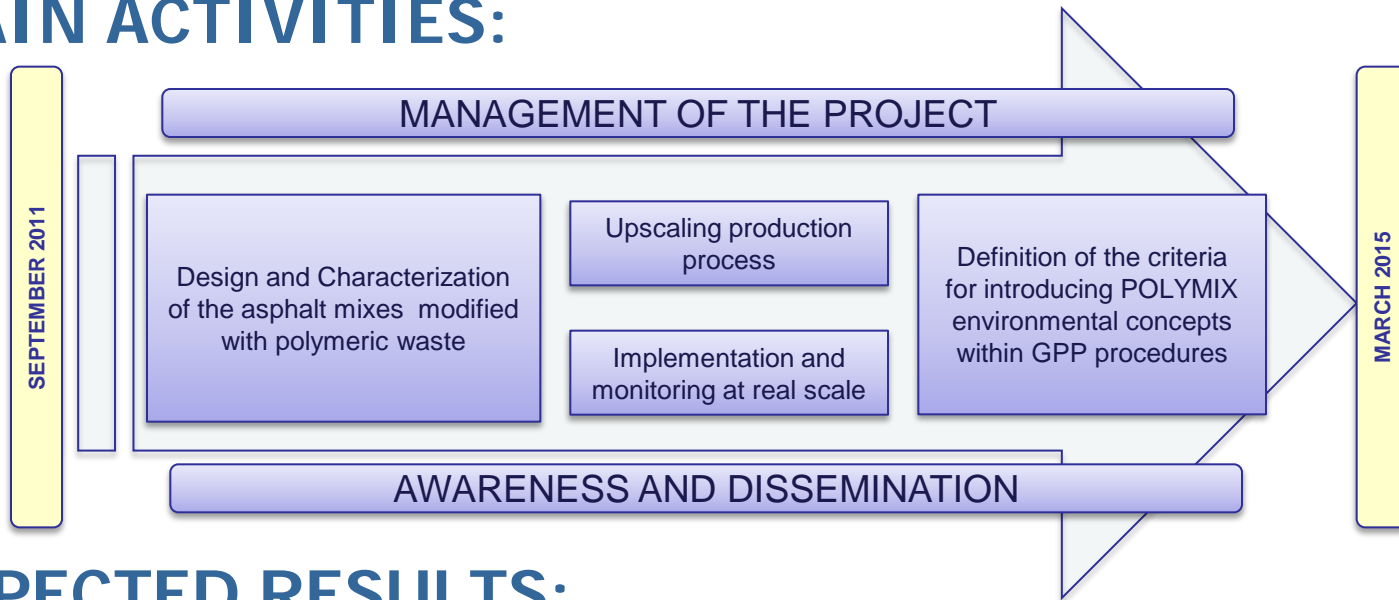
- ✦ Problems associated with dumps and landfill, generated by polymer characteristic of their difficulty to be degraded naturally.
- ✦ Problems related to energy recovery plants where wastes are burned and consequently generate pollutants emissions.
- ✦ Emissions associated to the production of aggregates, because it will be partially replaced by polymer wastes.

MAIN EU POLICY(IES) TARGETED:

- ✦ Sixth Environment Action Programme of the European Union (2006-2012) identified Waste prevention and management as one of its four top priorities.
- ✦ The Waste Framework Directive 2008/98/EC obliges Member States to meet the target for 2020 of 50% for re-use and recycling of waste materials such as paper, metal, plastic and glass from households and similar waste streams .
- ✦ Lisbon process contributing to a European knowledge based approach.
- ✦ EU 2020 “A European strategy for smart, sustainable and inclusive growth”: with new environmental friendly products thus contributing to sustainable growth and to a more resource efficient, greener and more competitive economy.



MAIN ACTIVITIES:



EXPECTED RESULTS:

The Use of polymeric wastes in asphalt mixes will be aimed to the following goals:

- ✦ Reuse and revalorization of polymeric waste.
- ✦ Improve rutting resistance and modulus of the asphalt mixes increasing roads infrastructure durability reducing maintenance needs.
- ✦ Reduction of the consumption of many tones of natural aggregates and of the emissions associated to aggregates production in quarries.
- ✦ Polymix will support European policy makers in defining general conditions and priorities to increase recycling of wastes.
- ✦ Set recommendation to standards and GPP for the construction sector.