



AFTER LIFE COMMUNICATION PLAN

LIFE10/ENV/ES/000460

1. PROJECT HISTORY AND ANALYSIS

EXISTING PROBLEM

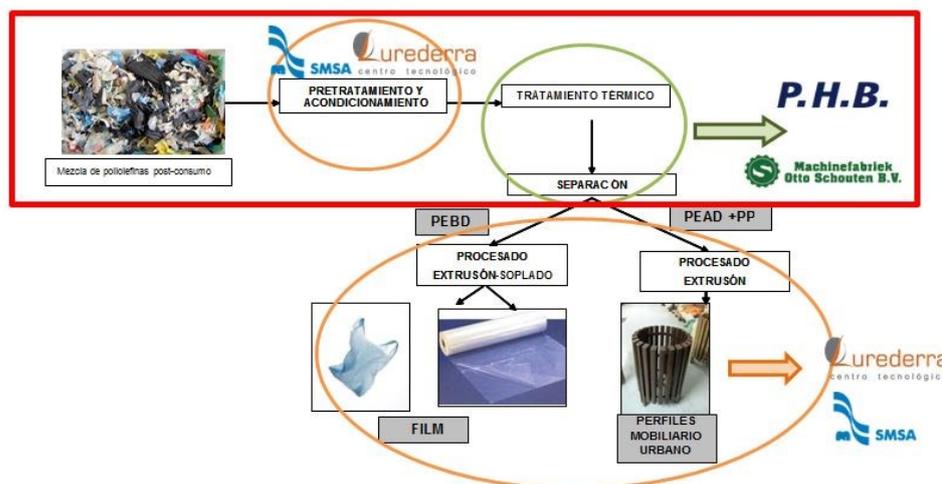
- West Europe plastic consumption is about 34Tn/year.
- Only 1,5Tn of the plastics are recycled.
- The 69% of the recycled plastics come from industrial uses and most of them come in flakes or film (52%) .
- Only the 20% of the non industrial wastes (bottles) are recycled.
- Post-consumption plastic films are the most proportion of non recycled plastics. (80% of non industrial wastes) .
- The 95% of the post-consumption plastic films waste belong to a mixtures of the kinds of polyolefin (LDPE, HDPE y PP).
- The additional separation of LDPE, HDPE y PP is very difficult due to the similar densities they have.
- Around 3Tn of this kind of post-consumption plastic films are available to be recycled in Europe.

The main objective of the project REC-POLYOLEFIN is the design and development of a demonstrative pilot plant, with a treatment capacity of 1.000 Kg/h of plastic material. The aim of the demonstrative plant consist of achieving enough separation in two fractions from a polyolefin mixture (LDPE, HDPE, PP). One of this fractions would be LDPE practically pure (> 95.5%) y therefore being processable by extrusion-blow, another fraction based on HDPE and PP (<20% de LDPE) which would continuously be addressed to uses that requires less technical requirements such as profiles or bars.

The project REC-POLYOLEFIN started the 1st of September of 2011 and finished the 31st of August of 2014. The results obtained during the project implementation were as follows:

- Developing of a required technology at pilot scale in order to achieve the separation of polyolefin mixtures wastes, leading to two different fractions: one based on LDPE with less than 4,5% of impurities and another one based on HDPE and PP with less than 20% of impurities.
- Developing of products with specific applications from recycled polyolefin. Obtainment of LDPE films by extrusion blow and HDPE and PP profiles trough extrusion for street furniture manufacturing.
- Environmental awareness to the consumer and promotion to the companies in using recycled raw materials.

GENERAL SCHEME OF THE PROJECT



ANÁLISIS DAFO DEL PROYECTO REC-POLYOLEFIN

Then a SWOT analysis (Weaknesses, Threats, Strengths and Opportunities) that allows a better assess to the current situation and the identification of targets for the post-Life Communication Plan.

Weaknesses: Dependence of the economic situation and the result for productive investments realized.

Current situation of general crisis, thus there is no need to open new markets.

Dependence of the plastic wastes and therefore different batches depending on their origin.

Threats: general stagnation of the construction sector that can be difficult, due to the direct entailment to the developed products by the pilot plant, the achievement of sales levels expected and thus the loss of competitiveness.

Quality demands from the market can be a priority over

factors, such as the costs or the time, and leaving to a secondary place the environmental requirements.

Strengths: New environmental standards at European Level (proposal to amend Directive 94/62 / EC on packaging and packaging waste, so that the consumption of plastic bags is reduced by half in 2017 and 80 percent in 2019).

Competitive prices regarding other materials such as Wood.

Optimum properties of the materials to furniture and construction uses.

Opportunities: Flexibility and adaptability due to the market requirements. Institutional support in environmental matters. New products and services to satisfied new customer needs. Waste reuse and then more economical raw materials.

APROBADA LA PROPUESTA PARA LA MODIFICACIÓN DE LA DIRECTIVA 94/62/CE, RELATIVA A LOS ENVASES Y RESIDUOS DE ENVASES, PARA REDUCIR EL CONSUMO DE BOLSAS DE PLÁSTICO.

During the execution of the project REC-POLYOLEFIN the revision of the directive of 1994 about the packaging and waste packaging has been important. The objective was the reduction of light plastic bags (with a thickness less than 50 micrometres or 0.05 millimetres), at least a 50% until 2017 and a 80% until 2019 (comparing with the 2010 data). Thus the Lurederra Technological Centre considers that the innovative recycling technology whose effectiveness has been demonstrated through the LIFE program, could contribute helping to perform with the main objectives of the directive. The directive tries to reduce waste levels through an effective use of resources.

Initially the target of such diffusion activities will be:

- * **Companies related to the construction sector:** Architects, designers, specifiers of new materials, companies dedicated to the manufacture of profiles, etc.
- * **Companies related to the street furniture:** Manufacturers of benches, bins, children parks, fenced, information boards, etc. .
- * **Local authorities:** Navarre Government has shown the interest in recycling activities carried out by Lurederra. Moreover, SMSA meet periodically with Tierra Estella municipal authorities to aware and promote recycling activities within Navarre.

- In 2010, each citizen from the Union used about 200 plastic bags. An 89% is used once before becoming a waste.
- Around a 90% are light bags less reusable and more contaminants for the environment.
- Each year about 100.000 millions of plastic bags are consumed and 8.000 millions of plastic bags are thrown and goes to the landfill and even to the sea.
- Currently about a 6,6% of the plastic bags are recycled. Although a 39% is burned, one of two goes to landfill.

2.2 METHODOLOGY

Means and tools to be used for the promotion of recycling activity developed are:

- * Maintaining the project website: Using this tool numerous contacts have been established during project implementation. Therefore, the proposed system will remain in operation to continue establishing contacts of interest
- * The pilot demonstration plant recycling demonstrative visits: seminars and visits to the recycling plant will be convened to perform in-situ operation and the sampling of urban furniture prototypes developed in the project demonstrations.
- * Dossier informational leaflets and Layman Report: During the execution of the Project various informative leaflets and Layman report have been realized which lead to a general sight about the recycling activity develops and the obtained results.
- * Transmission of information to the competent authorities: inform of the results to local authorities and announce the resolutions adopted by the European Union in order to EU countries take necessary measures to reduce at least 80% in use of plastic bags by 2019.
- * Talks and promotion of results: the results obtained by processing post-consumer polyolefin mixtures once separated into two distinct factions within the new materials industry will be promoted, as well as within the scope of the search for new environmental solutions. Also demonstrations of the effectiveness of the technology developed will be held between companies dedicated to the management and recovery of waste.

3. FINANCING

The required resources to carry out the current After LIFE Communication Plan of the project REC-POLYOLEFIN (LIFE10/ ENV/ES/000460) will be provided by the Lurederra Technological Centre (Coordinator of the project). Additional financing will be taken into account if the operating range don't overcome the original estimates.



PHASE I:
TRATAMIENTO TÉRMICO



PHASE II:
SEPARACIÓN NEUMÁTICA



FASE III:
PRODUCCION DE PROTOTIPOS