

RESEDA's PAVING STONES RECYCLING PLASTIC BAGS IN MALI

Created by [RESEDA](#) in Niger, the technology that transforms plastic bags for producing highly resistant stones to pave roads is increasingly being used in many neighbouring countries.

One Project with the support of the Trust Aga Khan for Culture (AKTC) is being implemented in Mali with excellent results, to produce paving stones in Sévaré for the streets of the Komoguel barrow in Mopti of the Fifth Region.

Thanks to the technical support of RESEDA the pilot phase of the project is evolving into setting up a production system of plastic paving stones, which could be applied in other interested territories of the country. The magazine [Mali Pense](#) has extensively documented the project and the innovative technology used, with videos and pictures that are presented in this article.

The technological process includes the fusion of the collected bags, adding sand, and then the mass is poured into a specially designed mould. 45 minutes are enough to dry the dough into the mould and the stones are ready to be used in paving. 20 kilos of plastic bags are needed to put together 5 Kilos of raw material. All plastic litters can be used as a combustible, considerably reducing the final cost of production.

The innovative process created by RESEDA is simple and affordable for small and medium enterprises, bringing big advantages in terms of environment, health, and economic and social benefits for the people involved.

Paving streets with this plastic material have great environmental advantages. The plastic burnt together with sand is transformed in an extremely solid raw material, similar to the asphalt. Another advantage in using this method to pave the roads is that this transformation of the plastic avoid the dispersion of heat at night time, consequence of the use of cement. The process has evident economic advantages thanks to the very low costs of production (components and time needed) and because it avoids public costs of the administrations in treating and disposing wastes widely produced by the territory.

This low cost technology permits to pave the streets of villages avoiding the clouds of dust of the dirt roads that cause respiratory problems, favouring a healthier environment for the population.



Another advantage of this technology is that enables the participation of the whole local population from both the environmental and economic point of view. In Mali the persons who participate to collect plastic wastes are paid for each Kilo of plastic conferred.

In Mali, the project underway in the city of Mopti has positively exceeded the experimental phase while on-going activities are focused to try to build an organic system of production that can be replicated in other cities of the country. The technology invented by RESEDA to produce road plastic pavements could be theoretically used also by the industries for profit, meanwhile in Mali the scope of the project is to put in place systems strongly rooted in the territory, through the creation of enterprises for the production process of plastic stones and a structured system connected to these companies for the collection of plastic bags, not only in the cities but also in neighbouring areas.

This system could take considerable advantages in terms of public interest related to the environment amelioration, improvement of animal and human health, cleansing of urban streets at convenient costs, as well as the creation of new employment within the factories and for the collection of the plastic bags.

RESEDA is a group of companies, associations and NGOs working since 1985 in various development initiatives in Niger to improve the quality of life, income and create new jobs with an approach that values the specific culture of local communities and the important role of women. RESEDA has managed to create a significant catalogue of innovative technologies in different sectors such as water management, transport, processing and storage of products of agricultural and pastoral activities, the use of renewable energies in productive and environmental activities.

The paving stones production technology recycling plastic bags now adopted in many countries of the region is an example of the great impact of RESEDA's work on innovative technologies responding to development needs of local communities. The production process is described in the [RESEDA website](#) through documents and videos.

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