

GREEN CAKE NEW BRICKS MADE FROM RUBBLE AND COAL DUST IN PALESTINE

Majd Almashharawi and Rawan Abdullatif, two engineering graduates from the Islamic University of Gaza (Palestine), discover a new bricks-mixture composed of a recycled rubble and coal dust. The new brick, named *Green Cake* have been tested during a year reaching a great success. The engineers are now scaling operations for mass production.

Green Cake are environmentally-friendly building blocks which are of a high quality and affordable. The weight of the new brick is half of the current one commonly used in Gaza and its cost is 50% less. The aim of the innovators is to improve the Green Cake blocks specifications in order to create in Gaza a production line to help rebuild the houses that have been destroyed during the wars. To start this production line of the Green Cake bricks the engineers also opened a crowdfunding campaign through the Indiegogo online platform.

The invention was founded in response to the pressure put by the territory reconstruction needs, taking into account the limited availability of concrete bricks and locally available materials and thus potentially recyclable.

In particular the new bricks are handmade by recycling and substituting rocks and sand with coal ash and concrete rubble from demolition of buildings of the Gaza's destroyed houses still waiting to be rebuilt. The large amounts of rubble in the territory, in fact, creates major environmental problems, damages the air quality and also causes health problems to the population.

The other material recycled by producing the Green Cake consist of ash which replaces the aggregate and sand in ordinary blocks as a filler material. The use of ash helps to solve an environmental problem of the Gaza Strip territory where more than 600 million tons are produced annually burning coal and wood to generate electricity. These coal ashes cause direct pollution to the ground water supplies as they quickly permeate through the soil. They also pollute the air causing a serious danger to the population's health.

This powdered material confer unique features to the building bricks that are lighter and more durable. The result of the innovative research process of young engineers is the Green Cakes, environmentally friendly blocks with high quality and low cost. They represent a sustainable solution for these environmental problems and in perspective they can make a great contribution not only for the reconstruction of houses, but also for the today territorial needs of buildings.



The [Indiegogo website](#) illustrates through texts and images the process of reconstruction of a house built in 2016. The engineers who are protagonist of this important invention have been awarded by [international recognitions](#) and valued by the international press.

To know more

[Article in UNRWA website](#)

[Indiegogo website](#)

[Video in Youtube](#)

[Article in Palestinechronicle.com](#)

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