

# THE SOLAR POWERED LANTERNS MADE IN KENIA RECYCLING SCRAP METAL AND PHOTOVOLTAIC PANELS

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In 2004 Evans Wadongo designed a Solar Lamp and called it MwangaBora (Swahili for Good Light) as a way to improve quality of life in Kenyan rural areas. The solar lamp is an alternative to the dangerous kerosene lamps and firelight commonly used in rural African villages.

The lamps are made from locally sourced scrap metal and fragments of solar panels (made of 50% recycled materials) that charge a battery-powered LED light, while a USB port can be built into the base, offering an easy way to charge phones and radios.

This lamp won the [SEED award in 2011](#), which is a component of the SEED Initiative, a global partnership for action on sustainable development and the green economy. Since then the project of production and distribution of these lamps has been increasingly growing due to the impact that managed to generate. Wadongo estimates he's distributed around 32,000 Solar lanterns to date.

Hundreds of millions of households in rural areas in Kenya without electricity rely on the light provided by kerosene lanterns, but these also have an adverse effect on health and the environment. Between 7-9% of the kerosene in wick lamps is converted into black carbon when burned, a major driver in climate change (right up there with CO<sub>2</sub>). People also inhale the smoke causing myriad health problems, among them respiratory issues and eye damage.

The simple, sun-powered lantern MwangaBora is cleaner, greener, and also cuts costs. The lamp also helps reducing indoor pollution associated with the use of kerosene lit lamps, lanterns or firewood.

In 2006, Evans Wadongo founded the NGO [Sustainable Development For All-Kenya](#) to raise public awareness and collect donations for the production of the lantern, which is one of the main focus, combined with education, environment, and economic empowerment. The group buys excess pieces of solar paneling, cut from commercially sold panels, in bulk from an overseas company. In an outdoor metal shop, Wadongo and volunteers hammer scrap metal for the frame of the lantern. The group has helped reducing production costs to \$20 per lantern. Costs are covered by donations and the group sets a small percentage of the cost of each lamp to go toward the volunteers.



The project, involves design, production and distribution of solar-powered lamps. Volunteers help build lanterns and work with local government and women's groups to determine the communities most in need. The project partners with women's groups where young people are trained in manufacturing solar-powered lanterns which are distributed to rural households without electricity improving the overall standard of living and education.

The initiative also helps communities to set up environmentally sound economic ventures with the money that would otherwise be spent on kerosene. Using these lamps, the groups make savings by not spending money on kerosene (up to 75 cents a day, 60% of rural Kenyan workers' average daily earnings), which is then invested in small businesses, such as handicrafts by the women of the village, or raising livestock.

Their success encourages others and additional lamps are bought, further developing the economy in the area. *Sustainable Development for All* has distributed more than 32,000 solar lamps to date, beginning with 500 in the year 2004-2005 to 5000 in the year 2010-2011.

Evans Wadongo also created the [Just One Lamp Organization](#), which aims to directly impact at least five hundred thousand people. Wadongo plans to extend his project to neighboring countries and is already training interns, from Kenya and other African countries, in order to decentralize production of the lamps, thus providing work for unemployed youths.

In 2013 the solar have been on view at the Pavilion of Art & Design, London, (UK) and part of a display at the New York gallery Friedman Benda, where sales are helping to provide thousands of lamps to households in rural Africa.

### To know more

[Sustainable Development for All Website](#)

[History in Sustainable Development for All website](#)

[Just One Lamp in Facebook](#)

[SEED Award 2011](#)

[Sustainbydesign.wordpress.com](#)

[Article in thecommonwealth.com](#)

[Article in designindaba.com](#)

[Article in changemakers.com](#)

[Article in rinnovabili.it](#)

[Article in edition.cnn.com](#)

[Article in agreenamerica.org](#)

[Evans Wadongo in Wikipedia.org](#)

