



From threat to resource: Precious Plastic gives new life to plastic

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A hands-on approach, an 'open' mindset and a master's thesis. These are the elements that brought Precious Plastic to life. **Precious Plastic is a global community which connects hundreds of people working to find a solution to plastic pollution.** Knowledge, tools and techniques are shared online for free. This allows everyone to enter the community and to give their contribution. Thus, Precious Plastic is still growing and has recently expanded to the African continent, after projects coming from the U.S.A., Europe and South East Asia.

by [Luca Indemini \[https://twitter.com/lucaindemini\]](https://twitter.com/lucaindemini) (translation by [Agnese Glauda \[https://www.linkedin.com/in/agnese-glauda-b4b26615b\]](https://www.linkedin.com/in/agnese-glauda-b4b26615b).)

The [Precious Plastic \[https://preciousplastic.com/\]](https://preciousplastic.com/) project was created by **Dave Hakkens**, a Dutch young man. He designed a machine to recycle plastic at home while working on his master's thesis.

Now, he has come a long way from the first model. In fact, four [machines \[https://preciousplastic.com/en/machines.html\]](https://preciousplastic.com/en/machines.html) were designed four and the [instructions \[https://preciousplastic.com/en/videos/build/shredder.html\]](https://preciousplastic.com/en/videos/build/shredder.html) are available for free on his website, together with video tutorials. Hence,

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WE HAVE CREATED MACHINES THAT
ENABLE ANYONE TO RECYCLE PLASTIC.
They are made from basic materials, affordable & easy to build.



The four recycling machines designed by Precious Plastic

Firstly, there is the **Shredder Machine**, which breaks down the plastics in very small pieces, easy to work with. Then, there is the **Extrusion Machine**, which transforms residuals in threads (useful, for instance, in 3D printing). The most advanced is the **Injection Machine**, which creates very specific items, with molds, in a short amount of time. Lastly, we find the **Compression Machine**, which creates larger items.

Precious Plastic 3 - Promo



Only the products created through the recycling process can be a source of profit.

Joining the community is quick and simple. You only need to access the website and register on the map. In the beginning, the members were mainly FabLab, makers and geeks. Lately, also various organizations have joined, including training institutions and NGOs working in developing countries.

During the past six years, the community has grown considerably along with the ideas and shared

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About thirty users with different backgrounds have joined the Precious Plastic community in the African continent. Some projects are less established than others, with the main goal to raise awareness regarding waste management and others are already experienced businesses.

One of the most interesting projects is the [\[https://koun.ma/\] Koun](https://koun.ma/)

[\[https://koun.ma/\]](https://koun.ma/) social enterprise, set in Casablanca, Morocco. The Precious Plastic website defines Koun as the 'true recycling heroes'. A youth group collects the plastic waste to transform it into new items for the growing Moroccan middle class, searching for beautiful and ethical products. Stools, handbags, mugs, lamps, chandeliers and many more.

Up-cycling principles inspire Koun's philosophy. In fact, up-cycling is the art of transforming waste into items worth more than the original. Koun collects raw materials directly from factories, schools and Casablanca associations. Then, turns waste into original products. The project has a positive social impact as it employs young disadvantaged people. Five of them work under the supervision of Mohamed, the foreman.

A different situation is found in Yoff near Dakar in Senegal, where **Precious Plastic** [\[https://www.facebook.com/preciousplasticdakar/?_rdc=2&_rdr\]](https://www.facebook.com/preciousplasticdakar/?_rdc=2&_rdr) found its way to the hostel [ViaVia](https://viavia.world/fr/afrique/dakar) [\[https://viavia.world/fr/afrique/dakar\]](https://viavia.world/fr/afrique/dakar). The hostel built three machines that cut, melt and press plastic into products, such as plates and bracelets. Karen, Jens, Masha, Jitse and Yehbonne, five Belgian students from the University of Leuven started this program. The [AFD](https://www.academicsfordevelopment.be/?lang=fr) (Academics for Development) [\[https://www.academicsfordevelopment.be/?lang=fr\]](https://www.academicsfordevelopment.be/?lang=fr) supported them while they volunteered during their summer vacations.



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interest towards the project and wish to build similar machines to fight plastic pollution. [https://preciousplastic.com/en/pilots/kenya.html], the Precious Plastic started as a pilot project between 2017 and 2018. In that case, the UN-Habitat [https://new.unhabitat.org/] (UN

program concerned with sustainable urbanization) invited Precious Plastic to create a plastic recycling workshop.



The venue of Precious Plastic in Kisii, Kenya

The project had two main goals: to solve plastic pollution and counter youth unemployment. Currently, the Kiisi workshop employs 11 people. Additionally, it is especially in trying to educate the local population on pollution, through clean-up events in the area. Finally, the Precious Plastic machines turn plastic into bright coloured vases and plates.

Up until now, the project worked on a small scale. However, if the good results are confirmed, UN-Habitat is hoping to create new workshops in the region and in the whole country.

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