



Sunflower cluster | Photo source Photo by Stanislav Štajer on Unsplash

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DESIGN STUDIO CREATES LEATHER AND GLUE FROM SUNFLOWERS

 SUSTAINABILITY

Vegetal glue, leather and polystyrene are formed using only natural products of the crop

Spotted: The Netherlands' [Studio Thomas Vailly](#) has made a full range of design materials using only sunflower plants. These include bio versions of polystyrene and leather and a non-toxic, natural glue and varnish. The process uses every part of the agricultural crop, including stalks and leaves, which would normally be left to rot in the field.

After the farmers harvest the seeds, the studio further heats and presses the leftover material to produce the materials. Pressing the hard, outer shell of the stalk creates hardboard, while the inner portion forms the core of an eco-version of lightweight polystyrene.

“A vast number of applications of what was previously considered waste becomes possible. Bio-based materials are not to be seen as a replacement for their synthetic counterparts, they have different qualities that can be exploited,” [Vailly told Dezeen.com](#).

The Luma Foundation and Stimuleringsfond creative industry provided funding for the project. The studio also [worked closely with](#) scientists from the Ecole Nationale Supérieure des Ingénieurs en Arts Chimiques Et Technologiques (ENSIACET) laboratory in developing the materials.

22nd April 2019

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Takeaway:

A combination of global climate change, population growth and decades of wasteful use of natural resources is driving sustainable design. Springwise has spotted a number of design-led solutions to geographic-specific challenges. In Morocco, communities **harvest water** from fog. And in Australia, **3D printed seawalls** are helping to restore sea biodiversity. Ideally, many such adaptations will make use of waste materials in their products and projects, thus helping to further stem the tide of worldwide pollution.