

# Taiwan turns plastic junk to 'green' gold

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Recycling station operated by Tzu Chi Foundation is pictured in Taipei. Environmentally conscious Taiwan is tapping into the market of recycled plastics to build exhibition halls, make clothes and other items in an industry with an estimated annual worth of \$140 million.

The mountains of used plastic bottles at a recycling station in Taipei emit a faint smell of garbage dump, but soon they will be turned into wigs and clothes that people will wear.

From fake hair to football jerseys and building bricks, Taiwan is breathing new life into its massive plastics waste, creating a booming new business at the same time as it aims to go green.

The island started recycling plastic more than a decade ago amid growing environmental concerns, and today it boasts about 73 percent recycling rates, according to the cabinet's Environmental Protection Administration.

Last year, nearly 180,000 tonnes of used plastic were collected and turned into raw materials worth 4.5 billion Taiwan dollars (140 million US), which cut down garbage disposal costs and [carbon dioxide emissions](#), it said.

"Recycled plastics can be made into many products such as garments, flower pots, wigs and zippers," said Ma Nien-ho, a spokesman for the administration's recycling fund management board.

"We are not only protecting the environment but also making money," he said.

Taiwan took pride in the so-called "eco-fabric" that was used by local companies to make the jerseys for nine teams competing in the recent football World Cup in South Africa.

Each jersey, made from eight plastic bottles melted and processed into polyester, is 13 percent lighter than traditional fabric and can absorb and disperse sweat more quickly, according to Taiwan Textile Research Institute.

"The production process is also more environmentally friendly as it takes less water and energy to dye the shirts when using coloured bottles," said Alex Lo, managing director of Super Textile Corporation.

Super Textile, a leading Taiwanese maker of eco-fabric, started exporting to the United States and Japan in recent years, which gave a boost of up to 10 percent to its business, Lo said.

"The response has been much warmer in the past two years due to rising awareness on global warming and fluctuating cotton prices," Lo said.

"We are optimistic that the World Cup publicity will help stir up more

demand."

Taiwan, a small island that consumes about 4.5 billion plastic bottles annually, is seen as having an advantage in manufacturing eco-textiles through lower transportation and recycling costs.

Tzu Chi Foundation, one of the island's largest charity groups, runs 4,500 recycling stations across Taiwan with the help of about 70,000 volunteers who collected 12,000 tonnes of used bottles last year.

The foundation has distributed more than 300,000 blankets made from plastic bottles since 2007 for relief uses at home and abroad, it said.

And perhaps in the near future houses built from [recycled plastic](#) bottles will mushroom across the island after "Eco Ark", the world's first such building, is unveiled in November.

"Eco Ark" -- a three-storey 24-metre (78-foot) high exhibition hall due to debut at the Taipei International Floral Exposition, is built from 1.5 million recycled [plastic bottles](#) and cost 300 million [Taiwan](#) dollars.

"The bottles are processed to make bricks that can resist earthquakes, wind and fire while providing the building with natural lighting to save electricity," said its architect Arthur Huang.

"The 'polli-bricks' are also less expensive than conventional materials like wood and glass so the construction cost is much lower."

Huang said his firm is currently building a luxury boutique hotel and several factories and corporate buildings with the bricks.

"Just imagine if we can replace all the steel roofs in the buildings in Taipei with light transparent polli-bricks. That would make the city look

more beautiful."

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