

Supporting a circular economy in the GCC

Dubai-based DGrade recycles plastic bottles into high-quality sustainable clothing by way of its Greenspun technology

The sheer statistics around plastic pollution are staggering. According to *National Geographic*, half the total amount of plastic ever manufactured was done so over roughly the last decade-and-a-half. The global production of plastic has risen from 2.3 million tons in 1950 to 448 million tons in 2015, though worryingly it is projected to double that figure by 2050.

Here in Dubai, an SME that was started a little over a decade ago – DGrade – has established a process to take PET plastic bottles and convert them into yarn that can be used to create high-quality fabrics.

Its Greenspun technology uses a process whereby plastic bottles are washed, shredded, melted into fibre and then spun into its trademarked Greenspun yarn.

DGrade has been providing a sustainable solution for corporate uniforms and branded clothing lines since 2010 by producing bespoke products for clients with its proprietary yarn.

The company is careful to reduce its own impact on the environment in the process of converting the plastic bottles into yarn which effectively diverts plastic from landfills. Using recycled plastic to produce new products supports a circular economy by utilising discarded plastic as a resource and reducing

Sustainable clothing and accessories diverts plastic from landfills, saves 50 per cent water, 20 per cent energy, and produces 55 per cent fewer carbon emissions, compared to virgin polyester yarn

reliance on other resources including oil. DGrade's process of producing Greenspun – which doesn't use any oil – uses instead 50 per cent less energy, 20 per cent less water and produces 55 per cent fewer carbon emissions compared to virgin polyester yarn.

It produces a wide range of textiles including shirts, trousers, caps, face masks,

backpacks, carry bags, blankets, and towels, among others. It can produce more than 200 different types of fabric from jersey, twill, canvas, and denim to fleece. The yarn can be treated further to make garments bacteria-resistant, UV-resistant, waterproof or even fire retardant giving the end products several uses from uniforms and accessories to branded merchandise. Products are designed and produced according to client specifications and can be printed with custom logos and designs too.

Plastic recycling rates are reportedly less than 10 per cent across the GCC. DGrade is working to change that. Over the past three years, it has expanded its operations to directly collect local PET plastic for recycling.

It does so through its Simply Bottles recycling initiative which works with businesses, events and schools to recycle their plastic bottles; they also source PET through local waste management companies which will help provide the 1,200 tonnes per month of PET which DGrade plans to process into hot washed PET flake through its Kizad Freezone facility.

The new 4,700-square-metre facility will wash, shred, and sort the PET plastic from labels and lids. The lids are processed and sold off to other plastic recyclers, while the PET plastic is hot washed and processed through DGrade's supply chain into Greenspun yarn.

Choosing to go down the sustainable road, can make good business sense too for companies embarking on this path. Businesses have a vested interest in combating pollution and sourcing sustainably as governments and customers place a greater



Above: The new facility at Kizad Freezone will process 1,200 tonnes per month of PET

Right: DGrade has been appointed as the official Dubai Expo 2020 licensee



focus on sustainability and sustainable manufacturing processes.

DGrade's Simply Bottles also creates awareness for plastic pollution and recycling through activities such as workshops, seminars, and desert clean-ups. The programme currently works with a range of clients and more than 180 schools in the UAE. It plans to expand this Simply Bottles recycling initiative from entities within the UAE to other countries across the GCC over the next 1-2 years.

DGrade's creations are already being recognized at the governmental level within the country. It was appointed as an official Expo 2020 Dubai licensee, and its T-Shirts with the Expo logo are being offered for sale at the Expo 2020 Sustainability Pavilion.

Another example of how DGrade is partnering with organisations and driving a circular economy is its partnership with Yas Marina



Circuit. In 2019, it partnered with Yas Marina Circuit to collect and recycle plastic from the Abu Dhabi Grand Prix establishing activations to engage visitors and placing PET recycling bins around the venue to recover PET plastic. More than 72,000 water bottles were collected during the event and then recycled into uniforms by DGrade for Yas Marina Circuit employees. It also works closely with Mai Dubai Water for its PET water bottle collection and production of sustainable uniforms and merchandise.

DGrade is determined to play a key role in supporting a circular economy in the region with plans to expand its PET plastic collection programme and partner with governments, blue-chip companies and smaller organizations alike, to support them in taking action to combat plastic pollution and support a circular economy.



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