

Out of the mouths of babes

'We children are doing this to wake the adults up. We children are doing this for you to put your differences aside and start acting as you would in a crisis. We children are doing this because we want our hopes and dreams back.'

Greta Thunberg



Millions are demonstrating across the world. Young and old have taken to the streets in 185 countries to demand action. It's not all to do with a 16-year-old Swedish girl with pigtails. But Greta and her plaits have certainly started to unravel the arguments of those who continue to claim that climate change isn't happening. 'We will make them hear us,' said Greta on the eve of the September New York Climate Strike. And here in Kenya her call was heard as droves of young people took to the streets wearing hats and outfits made from plastic bottles. Their aim was not only to highlight the threat of climate change but also the dangers of plastic waste, which presents an especially serious threat to people living in the developing world. Inadequate waste collection often results in the double whammy of poor health for local communities *and* huge damage to the environment.

Kenya, however, has long been in the vanguard of those countries committed to outlawing plastic. Kenya has implemented some of the world's strictest laws on single-use plastic bags. Here you can expect large fines for simply carrying a small plastic carrier bag. Meanwhile, on our beaches and in our national parks, forests and conservation areas, single-use items such as plastic straws, cutlery and drinking cups are to be banned completely from June 2020. Down on our Indian Ocean beaches, regular teams, made up of visitors, youngsters, activists and ordinary people alike, head out daily to collect the huge drifts of plastic that wash up on our shores. Given that around three percent of global annual plastic waste enters the oceans each year - which in 2010 was approximately 8 million tonnes - this might seem like the labours of Hercules. But some youngsters in Nairobi refuse to be daunted. And they've taken an ultra-practical approach to the polymer problem.

In 2018, students at the **International School of Kenya (ISK)** set up a non-profit student-led club called **Plastiki Rafiki** that is committed,

not only to cleaning up the environment but also to empowering Kenya's local communities. The first line of attack adopted by the students has been in organizing focused plastic collections from natural areas where the removal of plastic refuse can make a visible and tangible difference. The students have also worked with local companies to design and build their own range of plastic recycling and remoulding machines. And they've come up with a range of recycled plastic products each of which is themed to represent the area from which the rubbish was collected. So, for instance, there's a 'Mount Kenya' range of merchandise and a 'Coast Collection' range. Best of all, the profits from the sale of **Plastiki Rafiki** products are poured into the enhanced development and design of low-cost plastic recycling machines, the perfection of current product design, and the promotion of grassroots plastic collection and recycling in Kenya. Finally the students have begun working with local community groups to train them how to produce their own merchandise and use the proceeds for the greater good of the community as a whole.

Plastiki Rafiki and local adventure sports company, **Savage Wilderness**, came together recently to lead a rubbish collection and awareness drive on Mount Kenya. As well as their own teams, the collaborators also sponsored twenty of the porters, who typically help visitors climb the mountain, to help collect and dispose of the rubbish - not only on the montane trails but also around the campsites and the shores of the charismatic lakes - Lake Alice, Lake Michaelson, Lake Ellis and Lake Rutundu. Now the students are focussing their brains on how to use their profits to install signage on the mountain that reminds hikers to 'carry in - carry out' their rubbish.

'The eyes of all future generations are upon you. And if you choose to fail us, I say - we will never forgive you,' said Greta Thunberg at the UN Climate Summit in New York in September 2019. In Kenya, at least, the current generation seems to be doing anything but failing us. »



ISK's Plasiki Rafiki and Savage Wilderness volunteers embark on cleaning up Mount Kenya. All photos © Plastiki Rafiki / International School of Kenya



Top: Cleaning up Kenya's beaches.

Middle and bottom: some of the ingenious recycled products made by Plastiki Rafiki and local communities. All photos © Plastiki Rafiki / International School of Kenya



Turtle killer

More than 700 marine species are known to be harmed or killed either by the ingestion of plastic or entanglement - resulting in the deaths of more than 100 million marine animals a year. In Kenya, killer plastic is having a negative effect on Kenya's world-famous turtles. The reasons are simple: a floating plastic bag can look like a lot of jellyfish, algae, or other species that make up a large part of the sea turtles' diets. And not only are they dying from ingesting plastic bags, but they are also being ensnared in plastic nets. It is estimated that 34% of all dead leatherback sea turtles are found to have ingested plastic.

Worse still, it seems that plastic waste is affecting their ability to reproduce. Recent research has revealed that microplastics embedded in beach sand make it easier for water to flow through the sediment, which in turn affects how fast sand dries out. As microplastics accumulate, they act as an insulator, preventing heat from reaching deeper layers of the beach and affecting the temperature of sand. This affects the sex of turtle hatchlings, which is determined by the temperature of eggs during incubation. If a turtle's eggs incubate below 81.86 Fahrenheit, the turtle hatchlings will be male.