How one schoolgirl is encouraging others to save our oceans.

After witnessing plastic pollution first-hand, Belize schoolgirl Madison Pearl Edwards took action – and her example is a reminder that we need to support pupils to tackle difficult environmental issues

When the final episode of Sir David Attenborough's Blue Planet II exploded onto our screens it led to an outcry about the health of our oceans and the huge threat caused by plastics. Sir David has a large and loyal following, and as someone who has seen the level of pollution – and its effects – first-hand, it's no wonder he proved a first-class ambassador for issues such as these. But what many people hadn't predicted was the degree to which young viewers engaged with the series.

Madison Pearl Edwards, age 12, lives in Belize. Like Sir David, she witnessed the problem of plastic waste in the ocean with her own eyes as she snorkelled the length of the Belize Barrier Reef in 2017 in a bid to stop offshore oil exploration in this beautiful World Heritage Site.

Madi's efforts to spread the word about this delicate marine ecosystem, through her blog and social media, helped put pressure on the Belize government to pass a law that will put an end to all possibility of oil exploration in its waters. Whilst Madi's swimming marathon helped raise awareness of the threats facing the Belize Barrier Reef, it also served to highlight another big problem for the world's oceans – plastic pollution.

“Every day I saw something new – and it was not always marine life. There was a new type of trash (rubbish) in the water every day,” said Madi. “One day I found headphones with algae on them and knew they must have been there for a while,” she remembers. “I cleaned up as much as I could, but it was impossible to get all the trash out of the water.” Footage from her trip shows her swimming to and fro with her hands full, filling bags with plastic rubbish of all sorts.

Devastating footprint

Madi and her ever-growing online community of like-minded followers will need more than a few boats to collect the eight million tonnes of plastic waste being dumped in the ocean each year. According to WWF’s *Living Blue Planet* report from 2015, this amount is set to double by 2025. Plastic is found in the deepest reaches of the ocean, and even in remote Arctic sea ice. It’s a sobering example of the devastating human footprint we are leaving behind on Earth.

And here’s the problem – plastic is present in almost every aspect of modern life due to its convenience and durability. But it’s also a huge problem because of those very qualities, and it’s become the scourge of the planet’s oceans and rivers. Some human-made materials that are discarded in the ocean could take hundreds of years to degrade, and by 2050, there could be more plastic in the ocean than fish (in weight terms).

A lot of this damage isn’t even visible at first. Photodegradable plastics – which are used to make every-day items like shopping bags – break down into tiny pieces called microplastics, which never completely degrade in the ocean. They’re ingested by animals like plankton, passing the problem back up the food chain – to us. And 83 per cent of the world’s tap water is now contaminated with minuscule plastic particles, affecting billions of people.

According to the US-based National Oceanic and Atmospheric Administration, the long-term effects of microplastics on marine species – or on human health – are not yet known. What is under no doubt, however, is the devastating effect that large plastic debris can have on the thousands of animal species which regularly come into contact with it as it floats through the oceans. According to 2015 research from Australia’s University of Queensland, an estimated 90 per cent of seabirds and around 50 per cent of marine turtles have plastic in their stomachs.

It doesn’t seem to matter in what form the plastic comes; it’s capable of harming animals. Discarded fishing nets can trap seals, dolphins, turtles and whales. Plastic packing bands – used to bundle drinks cans together – can become so embedded in an animal that it can lead to severe infection and death.

Dangerous debris

Some animals – fish, turtles, birds and whales – mistake plastic for food, since a floating plastic bag looks very much like a jellyfish. Baleen whales may also accidentally eat plastic because their filter feeding technique involves swimming with their mouths wide open. One study found that over half of cetaceans (whales, dolphins and porpoises) have ingested debris and the cause of death for nearly a quarter of stranded cetaceans is marine debris.

What individuals like Madi and Sir David have shown is that we must tackle the problem of plastic pollution now. Schemes such as bottle deposits are a good place to start, but we're so reliant on plastics that we need to do a lot more to wean ourselves off them. The amount of plastic recycling is still small – only 9 per cent currently, with China and Europe leading the way.

Steps are being taken, including the plastic ban surcharge in the UK, and retailers are pledging to rethink packaging to use less plastic. WWF is calling for a full plan to ban avoidable single-use plastics – such as plastic cups and cutlery – by 2025, and working with global companies such as Sky to protect special areas of oceans called Marine Protected Areas, to help marine wildlife recover and thrive.

Back in Belize, the government has committed to eliminate the use of single-use plastics by 2019. It's a move Madison applauds but urges people to act upon now, asking her followers to think about how many single-use, plastic items they throw away every week. "Multiply that by 52 weeks in a year. That number gives you the difference you can make this year if you start today," she explains. "We need to be more conscious of our trash and know that when it ends up in the sea it hurts so many species."

Madi reminds us that young people are increasingly conscious of the environmental challenges facing our planet and their future. Yet they should not simply be applauded, they should also be supported.