TEXT 2

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Sarah Dudas

Microplastics are everywhere

Transcript:

I'm going to tell you a story, and it's my story, but it's all of your story too, and you'll soon see how. I asked my students to join me in the challenge of documenting how plastic touches our lives, by taking a photo every time we touch plastic. And at the end of that day, to put all of those photos together in one spot. Here, I share with you my day of plastic.

From the moment I woke up to the moment I went to bed, as a working mother − I have two young daughters − you can see that plastic is in every single element of my day. And I've had to make the photos quite small because it was challenging to fit them all on to this slide.

And if you're looking closely, you might notice that I've put multiple plastic items into many of the photos. It was quite overwhelming in the course of the day to take that many pictures, but you can see that plastic is in every single element of my day.

Right from the start, when I woke up to the sounds of my plastic alarm clock, the plastic packaging in the food that I ate, the clothing that I put on as I got ready to go outside, the phones that I talked on at work a lot, right through to the end of the day, when I tucked in my youngest daughter with her favorite stuffed animal, Pinky, synthetic, right down to the very last step of the day − a plastic book cover on the book that I was reading. Plastic is in every single element. And when I put all of these photos together, I found the result really shocking, but perhaps what's even more shocking is that we've only been using plastic since the 1950s. That's about 65 years, and in that relatively short span of time, we have generated the estimated 83 million hundred metric tons[1] of plastic on the planet. That's equivalent to 25,000 Empire State[2] buildings. Now, out of all of that plastic, only 9% has been recycled, and in my day of plastic, 9% looks like this. 60% has been thrown away. In my day of plastic, 60% looks like this, leaving us with the 31% that's still being used.

All of that plastic − over time, with the heat of the sun, light, oxygen[3], microbes[4] − will break down into smaller and smaller pieces. That may take 10 to 20 years for a plastic bag, upwards of 400 years for a plastic bottle, but over time, it will break up into the smaller and smaller pieces to what scientists now call microplastics.

[1] *83 million hundred metric tons*: 8.300 millioner tons
[2] *Empire State Building*: 381 meter høj skyskraber i New York City
[3] ilt
[4] mikroorganismer

Microplastics are defined as any plastic less than five millimeters, so about the size of a grain of rice, and we divide these into two types. The first, primary microplastics: plastic engineered[5] to be small. And there are many reasons why we do this: medical, personal, industrial.

Then we have our secondary microplastics, and these are plastics that are created from the breakdown of those large materials: fragments[6] from a plastic bottle, films from a plastic bag, fibers from netting, from rope, and even from our synthetic clothing.

Now, microplastics are in my day of plastic too, but they are harder to see because of their small size. But rest assured[7], they were there from start to finish.

Now, as scientists have looked across habitats[8] and environments, we found that microplastics are everywhere: in different habitats − from freshwater[9] to the ocean, from deep sea to the Arctic - and in animals − from the bottom of the food chain and zooplankton[10] and fish, and all the way to the top, to marine mammals[11] and even in ourselves. Microplastics are everywhere.

The study of microplastics is a new one, and our knowledge of the impacts of microplastics is limited, especially at the smaller sizes. And as we zoom down to those smaller sizes, right down to the level that's invisible to the naked eye, about a hundred microns[12] or the thickness of the sheet of paper, we find microplastics there too.

They are in my day of plastic, in the water that I drink, in the air that I breathe, and we're only just learning about microplastics in food. My research team has found microplastics in shellfish, in clams and in oysters. Other studies have found microplastics in chicken, honey, salt, beer, and we've yet to learn about microplastics in other foods.

Our microplastics are everywhere, but there is something that we can do about it almost everywhere we go, and it starts with the good old three "R"s from the 70s that we're familiar with: "reduce, reuse, recycle".

But we need to update these to add three new "R"s, starting with the first one: "refuse". Refuse single use plastic, refuse any plastic you don't need, refuse straws, refuse coffee cups, think critically about what you need, think about where away is. If you can't refuse it, reduce it. Think carefully about the plastic that you need, find natural alternatives where you can.

Now, if you can't reduce it, reuse it. Choose products that are built to last rather than those with planned obsolescence[13]. Try to get the most life out of your plastic items that you can, and if you can't reuse it, of

[5] konstrueret
[6] småstykker
[7] *rest assured*: vær sikker på
[8] levesteder for dyr
[9] ferskvand
[10] små vandlevende organismer
[11] *marine mammals*: havpattedyr
[12] en tusindedel millimeter
[13] levetid

course, recycle it, but even the hard things, even the things that don't fit into your curbside recycling[14]. In my case, that's plastic bags, styrofoam, electronics. If your community doesn't have a facility to deal with these types of items, then create the demand and the need for it, it's worth your time.

The second new "R": "rethink". We live in a society that doesn't place a high value on second-hand goods, we need to change that. We need to focus on services rather than replacement[15], and that is going to require the final new "R", and perhaps the most challenging, which is to "redesign".

Let's slow down fast fashion and focus on quality rather than quantity. All of these things, with a change in our linear[16] way of thinking, are within the realm[17] of possibility, and many are already happening. Let's "think outside the bottle"[18] and create room for innovation.

Plastic is a valuable product, we are reliant on it, and a future without it is completely unrealistic. But we can't and we shouldn't continue to use it and produce it on the increasing trajectory[19] that we are currently on.

Plastic is resilient[20], it lasts a long time, and while that is a problem in one respect, it represents an opportunity in so many others. Microplastics are everywhere, and while that scares me, what gives me hope is knowing that the solutions are too.

Thank you.

(*Applause*)

(2018)

[14] *your curbside recycling*: din egen skraldespand til sortering af affald
[15] udskiftning
[16] (her) traditionelle
[17] rammerne
[18] *think outside the bottle*: slogan fra kampagne mod drikkevand på flasker
[19] *on the increasing trajectory*: (her) i det stigende omfang
[20] modstandsdygtigt