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Scene-setter speech for Our Ocean in Malta 5th October 2017

I was woken in the middle of the night by a thud on the hull of our boat. We rushed up on deck to find we were surrounded by pieces of plastic floating in the ocean. It didn't make any sense. **We were over 1000 miles from land. The closest people to us were in the space station, in orbit above our heads.** And yet here was evidence of human life, and waste, all around us in one of the most remote parts of our planet.

At this time I was on a journey around the world on this biofuelled boat – Earthrace – on a campaign to promote alternative energy, a journey that started out as a way to hitchhike from England to a new job in Australia without taking an aeroplane.

But this incident sparked a new career direction for me – sailing the world on a mission to connect people – scientists and communicators – with the ocean, exploring issues from the Equator to the Poles.

We'd stop at small islands and find the locals could no longer catch fish to feed their families because commercial vessels had caused their fisheries to collapse. They could no longer grow crops in the ground as the rising sea levels had made their soil too salty. The consequence of this was a new reliance on imported food, that comes wrapped up and packaged in **this strange new material – *plastic*.**

With no system in place to deal with this trash, it ends up getting thrown on the beach, in the ocean and often burned. That stench of burning plastic kept getting up my nose, and when I started researching what that smell was, I learnt about these chemicals – dioxins – and how they are carcinogens that can get absorbed into our bodies.

And so this became my first mission: to eliminate the burning of plastic across a group of islands in Tonga.

First it was about shifting thinking. As I started learning the Tongan language I realised there wasn't a word for 'rubbish bin'. That the concept of throwing something away into a managed system didn't exist in the culture, as it hadn't needed to until very recently – organics can be thrown on the ground without problem. It wasn't only infrastructure that was needed; it was a whole new way of thinking about this new inorganic material.

Six months of working and teaching with the local community culminated in a colossal clean up and **together with 3000 local volunteers we picked up 56 tonnes of trash, in just 5 hours.**

This amount of trash staggered me. Both what was being produced locally but also what was washing up on the shoreline each day, including items with packaging labels written in languages I didn't recognise. Where was this plastic

coming from and why was it ending up on these remote islands in the Pacific?

And so I started to learn more about how we use plastic.

How is it that we are using - and then throwing away – **products that are designed to be used for 10 minutes – but made out of a material that's designed to last forever?** And why is it that we make those products in a way that they have no use or value at the end of their life?

Given that we have all this used plastic with no place to go, it's not surprising that we see tonnes – 8 million tonnes globally each year – washing down our streams and waterways into the ocean. I has seen where plastic goes when it leaves land. Moving into these accumulation zones, or gyres, in each of our oceans.

And so this became the next mission: to sail to these accumulation zones to find out more.

We went searching for islands of plastic – but we quickly realised that the plastic was smaller than expected. It doesn't just float around in big rafts on the surface but photo-degrades it into tiny fragments. Some sink, and some are ingested by marine life. We discovered that it is the same story everywhere – not only in the gyres, but all the way from the Tropics to the Arctic. **Our oceans have become a fine soup of plastic fragments.**

Much of it can't be seen from the surface by the human eye, which makes the seas look cleaner than they really are, and makes large-scale clean up an immense challenge. We had to take a fine net through the water to take a closer look. Each time we turned the net inside out, we would find hundreds of tiny fragments of plastic.

When we got the samples on board, we analysed them. I was shocked by how difficult it was to distinguish the plastic from the plankton. I wondered how fish would cope figuring out what is plastic, and what is their food. And so we caught fish and looked inside their stomachs, only to realise that there was plastic there too.

This opened up a whole new series of questions. Given that plastic is getting into the food chain – *our* food chain – could this mean toxic chemicals are getting inside us?

I decided to have my blood tested, to find out what toxic chemicals I have inside me. Working together with the United Nations Safe Planet Campaign, we chose to test for 35 chemicals that are all banned because they are known to be toxic to humans and the environment. **Of those 35 chemicals, we found 29 of them inside my body.**

This is when things really changed for me. So often when we talk about environmental problems we hear about things that are happening somewhere

else, to somebody else, at some point in the future. However, it seems you and I already have a body burden, a chemical footprint that we will never get rid of. And while the concentrations of chemicals I currently have inside me are not alarmingly high, it's a scary indicator of the direction our society might be heading.

The issues are complex and call for a wide range of solutions – but **the more time I spend at sea, the more I realise these solutions start here on land**...

There are ways to tackle the problem at every point – from source to ocean – from product design to waste management. But to solve these problems long term we need to turn off the tap. **We need to work at the source**. This upstream action is required across all sectors of society; working with designers in industry, policy makers at a government level and all of us as individual consumers.

One thing I love about being at sea is how you constantly have to react to the changes in the environment around you. If the wind picks up or the waves change direction you have to adjust your sails and change your course – often your life depends on that response.

We didn't set out to destroy our oceans on purpose. It was millions of micro actions that have got us here. But now we know. We know what's happening and we know how to change it. So we need to respond. We must adjust our sails and change our course – as if our life depends on it.

This is why I am so glad that you are here today making plans to protect our ocean.

My generation and generations to come want to count on the ocean as a source of food, energy, transport, minerals and more. But this will only be possible if action is taken now – to stem the flow of waste, and devise more sustainable ways of using this vital resource.

For this we counting on your leadership. For us to take custody of an abundant ocean **we depend on the commitments that you make here today.**

Thank you.