

# eXXpedition

ROUND THE WORLD IMPACT REPORT  
OCT 2019 – MAR 2020 | VOYAGE LEGS 1-8





# EXXPEDITION ROUND THE WORLD

In October 2019, eXXpedition embarked on a pioneering sailing voyage and research mission to circumnavigate the globe.

The mission set out to sail 30 voyages and 300 multidisciplinary women 38,000 nautical miles through some of the densest plastic accumulation zones, to tackle the devastating environmental and health impacts of single-use plastic and toxics in the world's oceans.

# OUR KEY AIMS

## SUPPORT SOLUTIONS SCIENCE

by contributing to world-class scientific studies that are urgently needed to inform upstream solutions and close the loop on plastic waste on land

## SHIFT PERCEPTIONS

by using our position to inform and educate so that people can better understand the real problem of micro-plastics and use that to shape actions and solutions

## CREATE A COMMUNITY

by empowering our network of inspiring leaders to create shifts in their community and beyond in order to tackle plastic pollution back on dry land





# THERE IS NO SILVER BULLET SOLUTION TO THE OCEAN PLASTIC POLLUTION CRISIS.

What's needed is an engaged and empowered mix of people leading solutions to the issue **from all angles**, bringing different skills and expertise to turn awareness into action.

# Plymouth to Tahiti

10,330 NAUTICAL MILES  
FROM THE UK TO  
THE SOUTH PACIFIC,  
SAILING ACROSS 2 OUT  
OF 5 OCEANIC GYRES





## 80 WOMEN FROM 28 NATIONALITIES

Making landfall in the Azores, Antigua, Bonaire, Aruba, Panama, Galapagos, Rapa Nui and Tahiti, our **multidisciplinary crew** has included teachers, marine biologists, film makers, circular economy experts, entrepreneurs and more.

*“Joining eXXpedition completely shifted my perspective towards this issue and I’ve had a chance to really think and reflect upon how this journey has shaped the way I see life now. In helping me to understand the issue better, it has allowed me to carry out my work at Global Plastic Action Partnership in Indonesia with a deeper understanding and to share this knowledge with the people of Indonesia.”*

**KIRANA AGUSTINA, INDONESIA, LEG 1**

*“This is what eXXpedition is all about: finding our SHiFT, that lightbulb moment that helps us see the unseen. And I am so grateful to my tribe of ocean sisters for helping me find it.”*

**HILARY NASH, IRELAND, LEG 6**

*“I loved everything about the eXXpedition mission: from mobilising a practical and energetic solution-focused approach to a global problem, to empowering women in sailing and STEM!”*

**CLAIRE MCCLUSKEY, IRELAND, LEG 7**



A photograph of two women with blonde hair, wearing black jackets, looking intently at a petri dish. The woman on the left is holding a small, light-colored sample between her fingers. The woman on the right is using a pair of tweezers to examine the sample. The background is a bright, outdoor setting, possibly a boat deck, with a blurred view of the sea and sky. A semi-transparent red banner is overlaid on the image, containing the text "Supporting Solutions Based Science".

# Supporting Solutions Based Science





# OUR SCIENCE PROGRAMME AT SEA AND ON LAND

The research conducted during the mission has been designed to advance a better understanding of the plastics issue as a whole and to work with industry to pinpoint solutions and policy at a global level by addressing knowledge-gaps and delivering evidence to inform effective solutions.

# 261 SAMPLES COLLECTED

**95 SURFACE MANTA TRAWLS** to examine the abundance, distribution and polymer composition of plastics in surface waters.

**60 COASTAL SEDIMENT SAMPLES** testing the hypothesis that sediments are a 'sink' for microplastics and to determine the abundance and polymer composition.

**96 SUBSURFACE NISKIN** to study the composition and distribution of different plastic polymer types within the upper ocean, which is currently a data deficient topic.

**10 AIR SAMPLES** to determine the threats of airborne microplastics in remote oceanic locations and the potential of wind as a vector for microplastic contamination.

*We've also collected samples to examine the microbial communities on these plastics; the pollutants contained within the microplastics; and we've submitted observations to test methods to detect plastics from space.*





## 72 CAPLITE WASTE MANAGEMENT STREET SURVEYS CONDUCTED IN 8 DIFFERENT LOCATIONS

The Circularity Assessment Protocol (CAP) involves the collection of community-level data by each crew in the countries eXXpedition visit. This includes mismanaged waste and waste infrastructure, and will be put into use informing decisions about how to reduce land-based plastic pollution. To date, the crew have logged **10,458 items into the Marine Debris Tracker.**

# PRELIMINARY FINDINGS: MANTA TRAWL, LEGS 1-8

*Please note: These findings are preliminary – we are constantly analysing more samples so this dataset will change through time to reflect our most current analysis.*

We've analysed more than 2200 individual microplastics.

The largest amount of microplastics we found in a single trawl was recorded near the *San Blas islands* (leg 5): nearly *500 pieces* of plastic. The next most abundant locations were in the North Atlantic Gyre (leg 2).

Twenty different polymer types have been identified (using PerkinElmer's Spectrum two FTIR spectrometer)

On every voyage leg, *Polyethylene* (HDPE/PE) has dominated the manta trawl samples, comprising *81%* of the microplastics identified.

Polypropylene had the next highest contributions to the total of microplastics identified.





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The majority of microplastics were 'secondary' in their origin: this means they have arisen from the fragmentation of larger items.

'Fragments' dominated the samples (47% – 88%) with 'film' being the next most prevalent microplastics type (up to 35% of the total).

Plastic pellets were only found in a small number of manta trawls, and their occurrence was localised, e.g. 70 pellets were recorded in a trawl near the San Blas islands on leg 5.

The contents of manta trawls were washed through stacked sieves, the size fraction 0.335mm – 1mm was found to be most abundant—again indicating the continual fragmentation of larger plastics into smaller microplastic fragments.



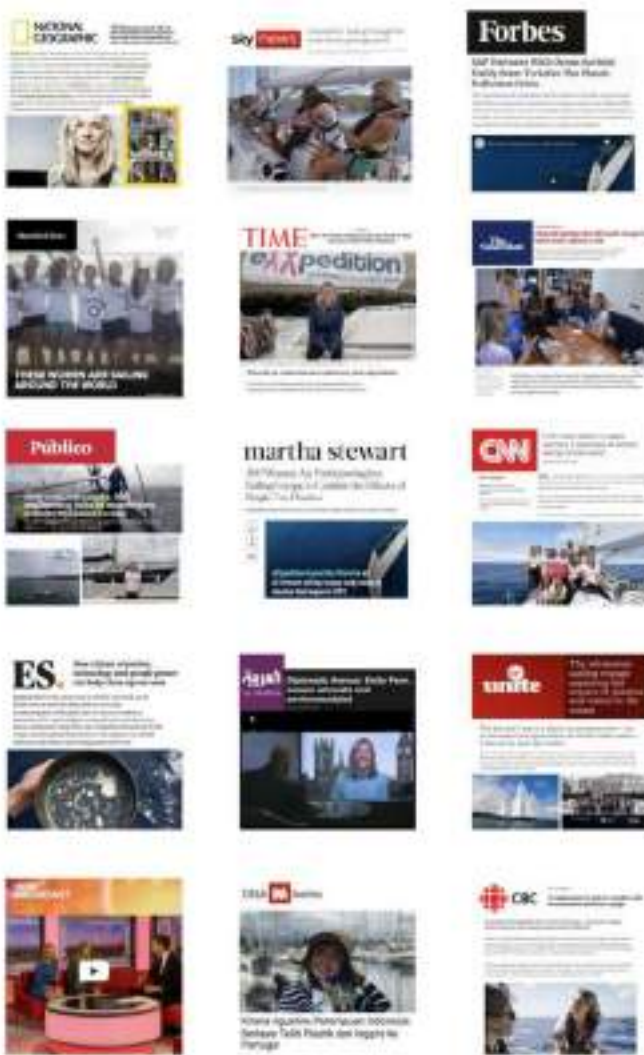
# Shifting Perceptions

# SHAPING THE NARRATIVE ON PLASTIC POLLUTION

Our pioneering voyages generate a lot of media interest and this helps to highlight the devastating impact of single-use plastic while shaping conversations around solutions to the problem.

eXXpedition Round the World has generated over **530 pieces of international media coverage**, including News Reports, Specialist In-depth Features and Interviews across every continent (except Antarctica!).

Beyond mainstream media, our press highlights include Industry Press ranging from Tech to Packaging, Local Newspapers and TV Broadcasts and hundreds of stories from our past and future guest crew.



# ENGAGING WITH LOCAL COMMUNITIES GLOBALLY

In collaboration with our local partners, we have worked closely with local leaders and communities in every stop of our Round the World mission so far, sharing our stories, experiences and findings at community events, workshops and presentations while learning and understanding more about the challenges and opportunities they face locally.

During eXXpedition Round the World so far we've conducted **34 outreach events and engagements in nine countries** including school talks, crew presentations, workshops, meeting the village elders in Guna Yala, beach clean ups and industry specific events.







## COLLABORATING TO CREATE A LEGACY

Whether it's through talks, meetings, sharing samples with local researchers, or helping support the implementation of local science programmes – like IBLab in Aruba – establishing a relationship with local leaders is key to furthering our impact long after our sailing vessel sets sail.

During the first 6 months of eXXpedition Round the World, our Mission Leaders met with Prime Ministers, Governor-Generals, Environmental Ministers, NGO Leaders, the Elders of the Guna Yala (San Blas) Congreso and other key representatives.



# Creating a Community



# CHANGEMAKERS MAKING SHIFTS GLOBALLY

Back on land, the women taking part in our mission have been busy sharing their experience with the world. Our crew have hosted **over 120 events in 14 countries** and shared their stories through interviews, blogs, talks and workshops.



# Travesía entre Galápagos e Isla de Pascua: Expedición que lucha contra la crisis del plástico en el mar incluye a una chilena

Durante dos semanas, un grupo de once profesionales de varios países tomó muestras para terminar con la contaminación en los océanos.

Una expedición profesional para acabar con la contaminación de los océanos parte de las Islas Galápagos y Maipo hasta la Isla de Pascua. El grupo de once profesionales de varios países tomará muestras para terminar con la contaminación en los océanos. La expedición parte de las Islas Galápagos y Maipo hasta la Isla de Pascua. El grupo de once profesionales de varios países tomará muestras para terminar con la contaminación en los océanos.



Paula Espinoza, integrante de la expedición, en un momento de la travesía.

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## SUNDAY POST

NEWS SPORT POLICE TRAVEL BUSINESS

### 'If I can sail across the Atlantic Ocean, I can do anything': Scots crew members on round-the-world plastic pollution yacht mission share their experiences

By Ann Coon



# BUT THEN...



CORONAVIRUS  
PANDEMIC

# Responding to COVID-19

Due to the COVID-19 pandemic it is unsafe to continue our at-sea Round the World mission in its original form.

In April 2020 in Tahiti we paused the remaining voyage legs, from Leg 9 onwards, for 12 months and focused our energy on creating change in a digital way and launched [SHiFT.how](https://www.shift.how).

Then, with the uncertainty of the situation continuing, in November 2020 the future at-sea voyage legs were cancelled and a series of Virtual Voyages have been developed to complete a route around the world.



[www.eXXpedition.com](http://www.eXXpedition.com)