

# OUR PACIFIC OCEAN, OUR STORIES

## Pacific Ocean or Plastic Ocean?

Social media has been littered (please excuse the pun) with stories from international media of marine litter and debris in our ocean. Images of marine species and bird life impacted by marine litter have been plastered throughout the media. With this visibility come shock and dismay, yet the statistics further cement the problem of marine litter and debris as a significant threat.

Each year at least eight million tonnes of plastics leaks into the ocean, there are at least 51 trillion micro plastic particles already in our ocean with marine litter harming over 600 marine species.<sup>1</sup> Approximately 80% of marine debris originates from land-based activities, with inputs from shorelines or via rivers and wastewater pipelines with the most prevalent types of marine debris being plastic materials.<sup>2</sup>

Let's tell our stories, make people aware and help people make the right choices so we can make a difference for our Pacific ocean.



### Marine debris is a problem because it...

1. Adds to our financial burden of waste clean-up and management, Pacific islands can be vulnerable to marine litter impacts due to our waste management challenges.
2. Can wound or entrap animals, does physical damage to infrastructure, can be hazardous to navigation and safety at sea, can alter habitats of marine species and can also transfer invasive species.
3. Has negative socioeconomic impacts, especially on coastal communities.
4. May impact our tourism industry as seeing marine debris in our waters does not make good aesthetics.
5. Can contaminate food supply, notably the absorption of heavy metals, organic contaminants and other chemical pollution onto the surfaces of microplastics which can then bioaccumulate up the food chain, including into human food sources.

“Air, land, and water pollution caused 9 million premature deaths in 2015, or 16% of all deaths worldwide. About 92% of all pollution-related mortality is seen in low-income and middle-income countries, with the poor, marginalized, and young hardest hit by the health effects of the contamination. The economic burden is immense: in 2016, ambient air pollution alone cost the global economy US\$5.7 trillion – 4.4 percent of global GDP.”<sup>3</sup>

### Did you know that approximately 80% of marine debris comes from land?<sup>4</sup>

There is a misconception that marine debris is only from waste that is discarded at sea, yet the majority of this comes from actions on land. It travels to the ocean from rivers, streams and wastewater pipelines. It can also be intentionally dumped on the coast, or littering on the street can eventually see it end up in our ocean.

1 Clean Seas. 2017. <http://www.cleaneas.org/get-informed>. Accessed 9 May 2018.

2 Markic A & Costello MJ. 2016.

3 The World Bank. 2018. <http://www.worldbank.org/en/programs/pollution-management-and-environmental-health-program>. Accessed at 9 May 2018.

4 Markic A & Costello MJ. 2016.



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## Interesting things to know

### Global Ghost gear

Ghost gear is any abandoned, lost or discarded fishing gear in our ocean that continues to trap and entangle marine life, smothers habitats and can be a hazard to navigation. It is estimated that at least 640,000 tonnes<sup>2 5</sup> of fishing gear are lost or abandoned in our ocean each year.

### Micro plastics and the food chain

The national fish consumption in our island region is as high as ten times the global average. Research shows that microplastics are being ingested by fish, fish that is also ingested by humans. While research has not yet been released on this in the Pacific islands, research<sup>6</sup> from Belgium indicates that Europeans that eat shellfish are also eating up to 11,000 plastic fragments in their seafood each year.

### Microfibres

These are tiny plastic fibres from synthetic fabrics that are making their way from washing machines to our waters and are found in abundance on shorelines where waste water is released. Synthetic fabrics include polyester, nylon, spandex, rayon and acrylic. On average, synthetic fleece jackets release 1.7 grams of microfibers with each wash.<sup>7</sup> The size of synthetic microfibers allows them to be readily consumed by fish and other wildlife.

### Microbeads

These are tiny plastic particles up to 5 millimetres in size and are mostly used in products such as face scrubs, body washes, and even toothpastes there are approximately 100,000 microbeads in a facewash product. These are washed down through waterways to our ocean and have the potential to enter the food chain.

## Talking the talk

- **Bioaccumulate** – refers to the accumulation or concentration of substances in an organism
- **Microplastics** – tiny pieces of plastic less than 5mm in size

## Telling our Pacific stories

**What story ideas can you think of to help raise awareness about this issue in your country?** What links can you see this information have to issues in your country? Has there been ghost gear found in the EEZ's of your country? Has there been bird or marine life been found dead because of plastic or marine debris?

**The information provided tells you about the issue, localising this can help make it more real for your communities and audiences.**

**What work is happening at the national level to help address this issue?** Not just that of your government, but also that of local community groups, NGO's, villages and schools.

**Highlighting the positive work on the ground can help empower people to do more there may be many good stories that are yet to be told.**

The Ocean Factsheets by the UN Environment Programme and SPREP are a good place to start when looking for more information.

5 Macfadyen, G., Huntington, T., Cappell, R. Abandoned, lost or otherwise discarded fishing gear. UNEP Regional Seas Reports and Studies, No. 185; FAO Fisheries and Aquaculture Technical Paper, No. 523. Rome, UNEP/FAO. 2009. 115p.

6 Van Cauwenberghe L, Janssen C, 2014. Microplastics in bivalves cultured for human consumption. Environmental Pollution, 193, 65-70.

7 Bren Microplastics. 2018. <https://brenmicroplastics.weebly.com/project-findings.html>. Accessed at 9 May 2018.