

ARTISAN FARMERS' MARKET MISSION

"To connect consumers directly with local farmers, small food producers and artisanal makers in order to support the community's financial, social and environmental objectives."¹

THE ISSUE

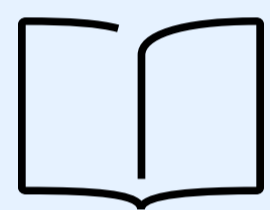
Metro Vancouver farmers' markets are phasing out single-use plastics at weekly markets beginning **summer 2020**.²

OUR GOAL

Creation of a single-use alternative solutions catalogue catered towards vendor concerns to ease the transition towards non-plastic packaging.

By **↓** single-use plastic consumption, this **↓** pollution within oceans and local soils, **↑** **community food security** for the vendors and customers of the AFM.

OUR APPROACH



Literature Analysis



Riley Park Farmers' Market Vendor Survey

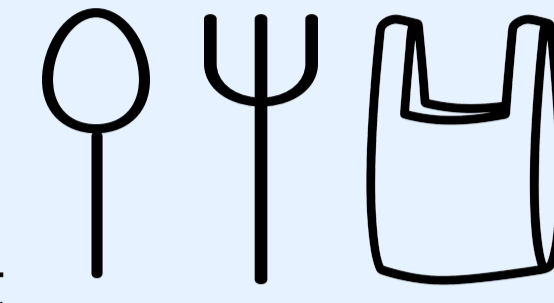


Riley Park Farmers' Market Site Audit

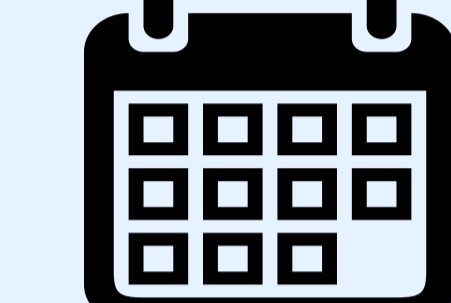
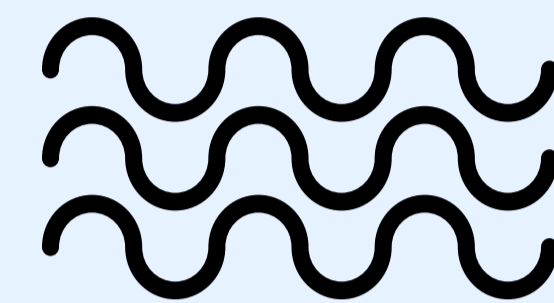
WHY IT MATTERS

Effects at Sea

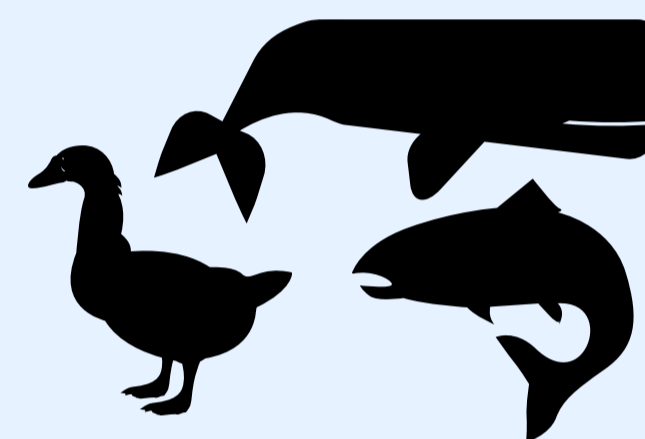
Plastic packaging and utensils are **discarded into the trash** or **littered** and get **washed away to sea**.³



There is an "estimate that at least **5.25 trillion plastic particles** weighing **268,940 tons** are currently floating at sea."⁴



Plastic pollution **harms marine wildlife** as well as organisms higher up in the food chain.³



Effects on Land

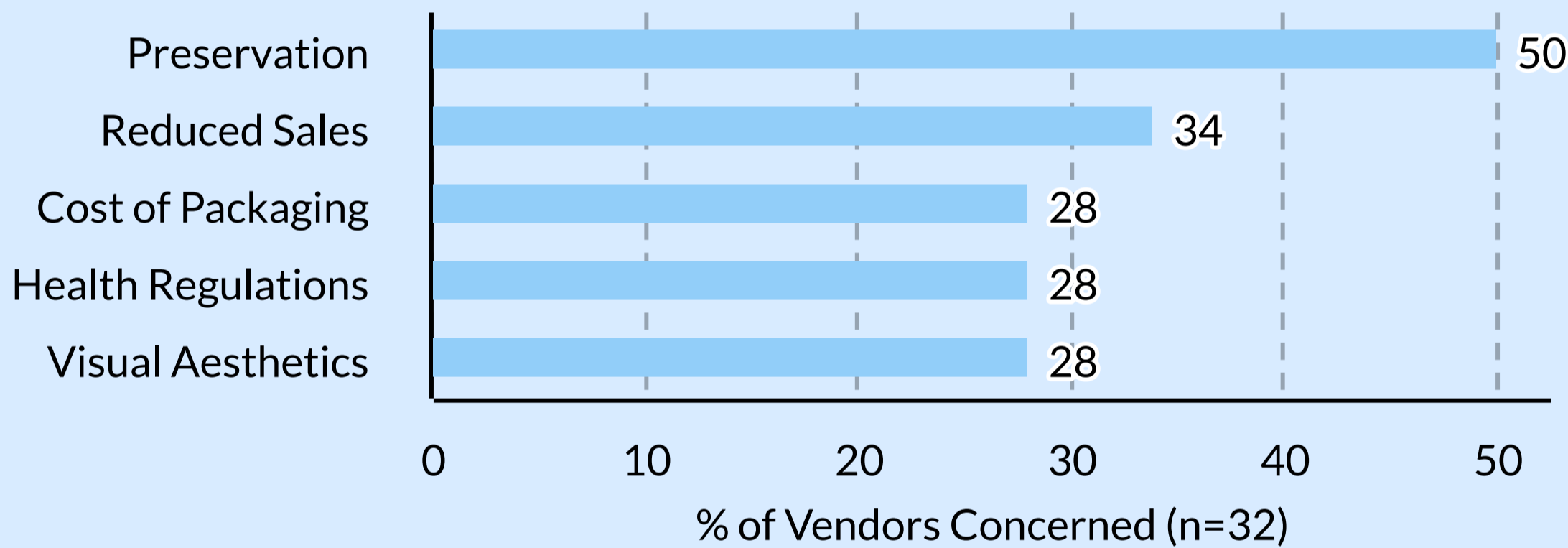
Plastic packaging and utensils are **discarded into the trash** or **littered** and end up in **landfills** or **local environments**.³

Plastic materials persist between **thousands to millions of years**.⁵

Plastic breaks down into **microparticles** that **leach into the soil and water systems**.⁶

WHAT WE FOUND

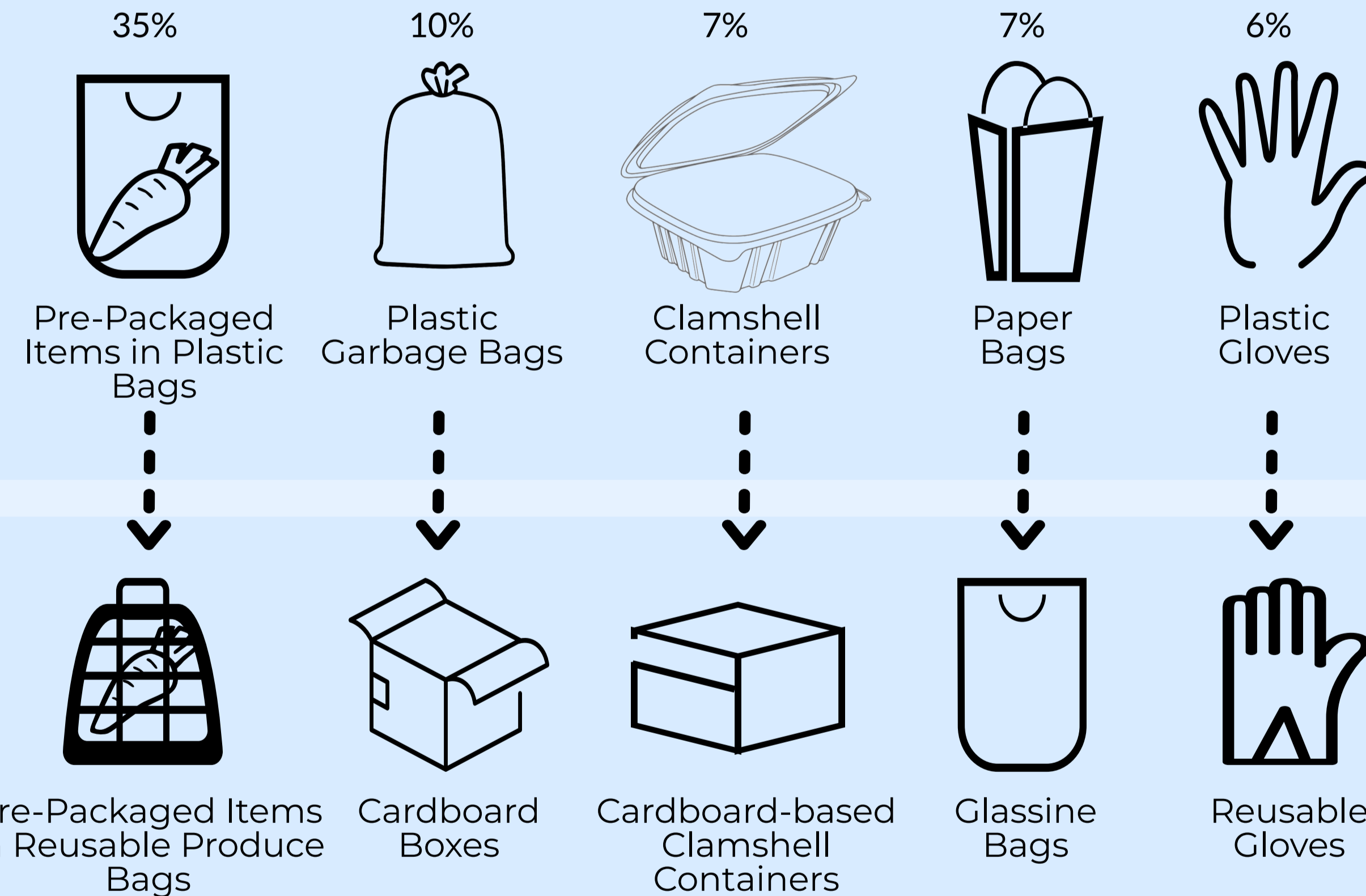
VENDOR CONCERNS OF PLASTIC ELIMINATION



Minor Concerns: Product protection during transportation, resources required to clean reusable materials, weight of packaging materials

PACKAGING USED BY VENDORS

Percentage of Vendor Using Each:

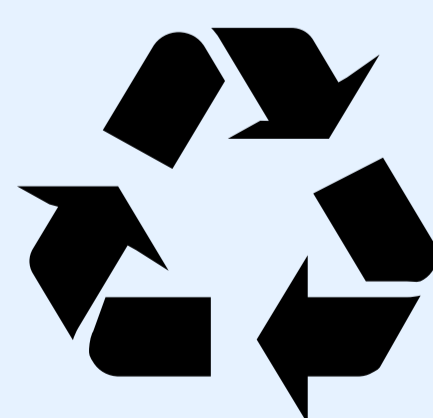


NOW WHAT?

Based on our literature analysis, vendor surveys and audit results, these suggestions are possible alternative for commonly used packaging in the markets.

NEXT STEPS

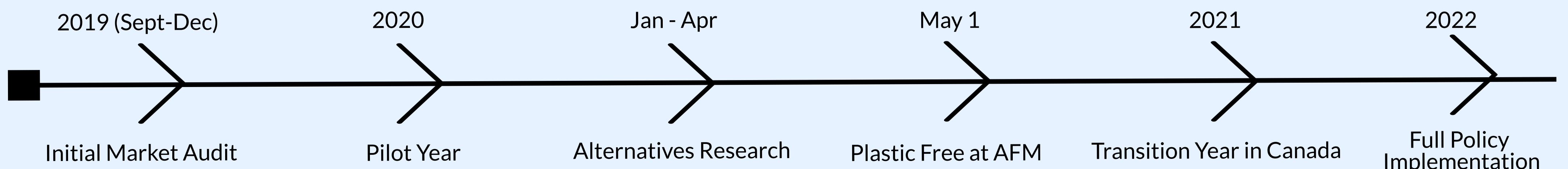
FOR VENDORS



FOR MANAGEMENT



WASTE REDUCTION TIMELINE



1. <https://lfs350.landfood.ubc.ca/community-projects/2020-winter-projects/26-2/>
 2. <https://vancouver.ca/green-vancouver/single-use-items.aspx>
 3. Derraik, J. G. B. (2002). The pollution of the marine environment by plastic debris: a review. *Marine Pollution Bulletin*, 44, (9) 842-852. [https://doi.org/10.1016/S0025-326X\(02\)00220-5](https://doi.org/10.1016/S0025-326X(02)00220-5)
 4. Eriksen M, Lebreton LCM, Carson HS, Thiel M, Moore CJ, et al. (2014) Plastic Pollution in the World's Oceans: More than 5 Trillion Plastic Pieces Weighing over 250,000 Tons Afloat at Sea. *PLOS ONE* 9(12): e111913. <https://doi.org/10.1371/journal.pone.0111913>
 5. Chidambarampadmavathy, K., Karthikeyan, O.P., & Heimann, K. (2017). Sustainable bio-plastic production through landfill methane recycling. *Renewable and Sustainable Energy Reviews*, 71, 555-562. <https://doi.org/10.1016/j.rser.2016.12.083>
 6. United Nations. (2018, April 3). *Plastic planet: How tiny plastic particles are polluting our soil*. UN Environment Programme. <https://www.unenvironment.org/news-and-stories/story/plastic-planet-how-tiny-plastic-particles-are-polluting-our-soil>