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ANMF (Vic Branch) Submission Inquiry into recycling and waste management

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INTRODUCTION

The Australian Nursing and Midwifery Federation (ANMF) (Vic Branch) background

The ANMF (Vic Branch) has a membership of over 85,000 comprising nurses, midwives and personal care workers (however titled and working predominantly in the private residential aged care sector). Our members are employed in a range of health services and clinical specialties including hospitals, aged care, community health, mental health, maternal and child health, alcohol and other drug sector, medical clinics, prisons and the Australian Red Cross Blood Service.

The ANMF (Vic Branch) actively promotes action on climate change and environmental sustainability. Nurses and midwives see daily the ways in which everyone's health is inextricably linked to the health of the environment in which we live. The negative health impacts of climate change and environmental degradation affect the key social determinants of health and damage social and community structures. These negative health impacts in turn increase pressure on already burdened health services.

Healthcare waste

Hospitals generate environmental health impacts through the natural resources and products they consume, as well as through the waste they generate.[1] Hospitals also contribute significantly to carbon emissions with a recent study showing the carbon footprint attributed to health care was 7% of Australia's total.[2] By properly sorting and reducing waste, and by having a waste and recycling industry that can support this output, not only are disposal costs reduced, so is the carbon footprint of health care.

While improper management of health-care waste poses a significant risk, the majority of healthcare waste is comparable to domestic waste and usually called "non-hazardous" or "general health-care waste". Between 75% and 90% of the waste produced by health-care comes mostly from the administrative, kitchen and housekeeping functions at health-care facilities and may also include packaging waste and waste generated during maintenance of health-care buildings [3] Large portions of hospital waste are amenable to recycling which reduces the amount of raw materials, energy and processing needed to replace essential items.

The World Health Organization recognises in its Core Principles that healthcare waste management should include waste minimisation and segregation. [4] Healthcare without Harm and Global Green and Healthy Hospitals (GGHH) provide a comprehensive environmental health agenda for hospitals and health systems with the aim to "achieve greater sustainability and to contribute to improved public environmental health.[5]" Waste management is one of the recognised engagement platforms.

GGHH states "it is the responsibility of governments to … ensure that healthcare facility managers take their share of responsibility to manage wastes safely and comply with national regulations. GGHH members can work to advocate for appropriate policy including 'Zero waste' policies that will reduce the amount of waste generated and enable health systems efforts on sustainability."[6] ANMF (Vic Branch) is a member of GGHH.

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[1] *GGHH A Comprehensive Environmental Health Agenda for Hospitals and Health Systems Around the World, p.4*
[2] *https://www.thelancet.com/journals/lanplh/article/PIIS2542-5196(17)30180-8/fulltext*

[3] *Safe Management of Wastes from Health-care Activities, edited by Yves Chartier p. 3 WHO 2014*
[4] *WHO (2007) WHO core principles for achieving safe and sustainable management of health-care waste. https://www.who.int/water_sanitation_health/publications/hcwprinciples/en/*
[5] *GGHH A Comprehensive Environmental Health Agenda for Hospitals and Health Systems Around the World, p.1*
[6] *GGHH Waste Guidance Document for Members; Reduce, treat and safely dispose of healthcare waste, p.5 https://www.greenhospitals.net/guidance-documents/#Waste*

ANMF (Vic Branch) member support - waste

The ANMF Health and the Environment policy[7] supports:

- collaboration between nurses, midwives and medical industry manufacturers to eliminate superfluous packaging and implement mindful design that facilitates end of life recycling wherever possible.
- sustainable procurement strategies.
- All health, aged care, and other facilities where health services are provided, seek to operate in the most resource efficient and environmentally compatible manner.
- All health, aged care, and other facilities where health services are provided, should set goals and targets in relation to the reduction of: general and clinical waste; energy usage; water and resource consumption; and levels of pollution generated by the facility.

In response to a delegates' resolution, passed at the 2012 Delegates Conference, which requested that ANMF (Vic Branch) become more involved in policy debate on climate change and environmental issues, ANMF (Vic Branch) launched a number of initiatives including:

- an annual Health and Environmental Sustainability Conference
- the development of a professional development seminar, Nursing for the Environment INTENSIVE.
- a Green Nurses and Midwives Facebook group.
- the employment of an Environmental Health Officer

ANMF (Vic Branch) also successfully advocated and lobbied the government on behalf of members with the result that funding was set aside in the 2017 Budget for the creation of a Victorian Healthcare Waste Education Officer.

The Victorian Waste Education Officer role was activated in April 2018 within the structure of the Victorian Waste Education Strategy. The objectives of this work were identified as:

1. Reduce the **environmental impact** of the healthcare sector through a reduction of waste generation and recoverable resources going to landfill
2. Reduce the **cost of waste management** (e.g. via correct use of clinical waste bin) to the Victorian public healthcare waste system.

There are 8 waste interventions in development and delivery across all Victorian Healthcare as a result. This project, its promotion with the imprimatur of government, will only feed the interest and opportunity of ANMF (Vic Branch) members to participate in activities such as waste reduction, segregation and diversion.

In 2017-18 Victorian public health services generated approximately 35,000 tonnes of solid waste and of this approximately:

- 8,000 tonnes was recycled
- 5,000 tonnes was clinical waste
- 22,000 tonnes was classified as general waste.[8]

There is room to improve on this 22.8% recycling rate and appetite within ANMF (Vic Branch) members to do so provided their efforts result in landfill diversion and environmentally sustainable solutions.

[7] *anmf.org.au/documents/policies/P_Health_Environment.pdf*
[8] *https://www.sustainability.vic.gov.au/About-us/What-we-do/Strategy-and-planning/Victorian-waste-education-strategy/Waste-education-in-healthcare*

ANMF (Vic Branch) welcomes this Inquiry into the Waste and Recycling industry and participates on behalf of our many members, many of whom are committed to providing their own time and work to reduce the carbon footprint of healthcare and contribute to a cleaner healthier planet for all generations and peoples.

RESPONSE FROM ANMF (Vic Branch) - INQUIRY INTO THE WASTE AND RECYCLING INDUSTRY

ANMF (Vic Branch) Recommendations

1. **Standardized collections and recycling criterion**

   People are confused about recycling with kerbside audits showing 10-15% of items are placed in the wrong bin.[9] This is added to when there is variance between council contracts and Material Recovery Facility (MRF) specifications. ANMF (Vic Branch) sees merit in the Australian Council of Recycling (ACOR) call to:

   - harmonising the collection systems
   - producing clear and identical information for everyone
   - running an information / community education campaign

   a. For this to occur nationally there would need to be collaboration through the Council of Australian Governments. We urge the Victorian government to progress a coordinated national approach.

   b. At the State level, we urge the Victorian government to work with the waste industry to develop consistent collection strategies and practices that can be integrated into funded community education.

2. **Improved Labelling: Support The Australasian Recycling Label**

   Research commissioned by the Victorian government in 2017 found that inadequate recycling labelling (e.g. on packaging) was causing confusion at many households and served as one of the barriers impeding kerbside recovery.[10]

   The Australasian Recycling Label is designed to reduce this confusion with clear on pack instructions on what to do. It shows what needs to be done with each piece of a package to dispose of it in the best way.

3. **Establish and support market for recycled content**

   Mechanisms to achieve this include:

   a. ensuring government, councils and businesses prioritise recycled goods over virgin materials, or at least have recycled material quotas. These can be specified in market guidelines tenders.

   b. An "*Australian Recycled Content"* label to highlight and support the use and purchase of Australian recycled material.

   c. Campaign encouraging the purchase of Australian recycled content

[9] https://www.bhg.com.au/common-recycling-mistakes; https://www.insidewaste.com.au/index.php/2019/04/15/recycling-industry-unites/

[10] *Optimising Kerbside Collecting Systems: supporting evidence and analysis. Submission to Sustainability Victoria, 16th August 2017, MRA Consulting."*

This also supports job creation. Two jobs can be created for every 10,000 tonnes of materials recycled.[11]

4. **Zero waste strategy**

   Allocate some of the Sustainability Fund to support businesses focused on reusing, repurposing, repairing and correct recycling. This could be incorporated with a skills development and job training program.

5. **Resource inventory to facilitate communication about resource available for industry**

   An example of this is glass stockpiles.

   According to Waste Management Association of Australia (WMAA) president Garth Lamb

   despite council contractors around the country having huge stockpiles of glass, council road projects are still using virgin sand as road base.

   He said that it's often a case of councils having no idea what resources are sitting in their contractors' collections depots, and there's no incentive to enquire[12]

   Work with Environmental Protection Authority (EPA) and business to create an inventory of resources that can be targeted for coordinated response between technology and industry need.

6. **Introduce a Container Deposit Scheme (CDS)**

   Almost every state in Australia now has a container recycling scheme announced or in place other than Victoria and Tasmania. Various polls have shown significant community support for the introduction of a CDS.[13]

   Environmental group Boomerang Alliance say every minute 15,000 bottles and cans are littered or landfilled in Australia.[14] According to Clean up Australia day reporting, one in ten items found on Clean Up Australia Day is a beverage container.[15] Since the CDS has been introduced in NSW eligible drink container litter volume has dropped by 44% and now represents an all-time low of 37% of the NSW litter volume stream.[16]

   Returning beverage containers for a cash value refund:

   a. Enjoys community support where it has been introduced eg: the daily average of drink containers being processed across the state of NSW is 5.8million.

   b. Increases recycling rates. CDS achieve up to 40% higher collection rates for plastic, aluminium and glass beverage containers than other collection methods.[17]

   c. Conserves resources through reducing the amount of virgin material required for new products.

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[11] https://www.wmrr.asn.au/Public/Press_Releases/It_s_time_-_buy_Australian_recycled.aspx
[12] https://www.abc.net.au/news/science/2018-03-03/recycling-industry-in-crisis-can-it-be-fixed/9502512
[13] *A national Newspoll has demonstrated continued massive community support for government action to introduce a 10-cent deposit and refund scheme on cans and bottles, with 82% overall in favour, and 80% in NSW.* https://www.tandlnews.com.au/2012/08/07/article/container-deposit-scheme-gathers-momentum/; *Total Environment Care Poll: https://www.sbs.com.au/news/majority-of-victorians-want-a-container-deposit-scheme-but-government-not-convinced*
[14] *https://www.sbs.com.au/news/majority-of-victorians-want-a-container-deposit-scheme-but-government-not-convinced*
[15] https://www.cleanup.org.au/drink-containers#ContainerDepositSchemes *last accessed 28.5.11*
[16] https://www.insidewaste.com.au/index.php/2019/01/22/return-and-earn-sees-6-8-million-containers-returned-during-festive-period/
[17] https://www.tomra.com/en/collection/reverse-vending/reverse-vending-news/2018/how-does-container-deposit-scheme-work

d. Lowers greenhouse gas emissions and water use. Sustainability Victoria [18] lists the following savings generated from recycling: water, greenhouse gases, energy, virgin materials, landfill space.

e. Creates jobs and cash eg: creates an alternative income stream for charities who run depots.

f. Is a mechanism for Extended Producer Responsibility where beverage companies and consumers - rather than local councils or taxpayers - pay for the administration of the scheme.

   Manufacturers and importers of products should bear a significant degree of responsibility for the environmental impacts of their products throughout the product life-cycle, including upstream impacts inherent in the selection of materials for the products, impacts from manufacturers' production process itself, and downstream impacts from the use and disposal of the products.[19]

g. Removing glass from kerbside comingle collections and introducing a CDS, would reduce the contamination of Victorian kerbside recycling, especially paper and paperboard, with glass fines. "The Recovered Resources Market Bulletin" released by Sustainability Victoria and the Waste Management and Resource Recovery Association (WMRR) notes that paper and cardboard collection in Victoria is usually contaminated by glass fines. "There are good markets and prices available for reasonable quality sorted paper grades, both locally and overseas. The quality of the fibre is a major threat. This is heavily influenced by how the material is collected (eg comingled recycling) …Improving the quality of the recovered fibre supplied to market (domestic and international) is a key opportunity for Australia and specifically for Victoria."[20]

[18] *https://www.sustainability.vic.gov.au/You-and-your-home/Waste-and-recycling/Recycling/Why-recycle*
[19] *https://www.oecd.org/env/waste/factsheetextendedproducerresponsibility.htm*
[20] *Recovered Resources Market Bulletin, Victorian Market Intelligence Pilot Project (edition #01), March 2019, pages 15,19*

ANMF (Vic Branch) concern about plastic pollution

ANMF (Vic Branch) is not only concerned about the aesthetics of litter in the environment, put also about its implications for public health and environmental degradation. This is of particular note in relation to plastic pollution.

The Oxford dictionary defines pollution as *the presence in or introduction into the environment of a substance which has harmful or poisonous effects*[21]. The United Nations Environment Program calls marine plastics the "new toxic time bomb"[22]. ANMF (Vic Branch) recognizes the inextricable link between human health and the environment and is therefore concerned about avoiding actual or potential harm. This extends to concern about plastics in the environment.

Plastic can break down into microscopic pieces that come with their own hazard set.

a. The chemical additives and compounds that plastics contain are able to enter food chains creating cumulative risks for animals and humans.[23] Micro-plastics are known to contain and absorb toxic chemicals and research on animals shows they are released into the body.[24] Potential adverse effects, at high enough concentrations, may include immune-toxicological responses, reproductive disruption, anomalous embryonic development, endocrine disruption, and altered gene expression.[25]

b. Micro-plastics can also accumulate and disperse other pollutants, such as heavy metals.[26] Once microplastics enter the aquatic environment, they have the potential to interact with chemical pollutants. Adherence and penetration lead to them containing concentrates many times higher than the surrounding water.[27] Dr Stuart Taylor, observes that not only is this toxic to marine organisms but it can also have adverse human health impacts. Minimata disease in Japan was a horrific outcome of people eating methylmercury contaminated fish from Minamata Bay[28] Closer to home, Sydney Harbour has been reported as having some of the highest dioxin concentrations in the world resulting in fishing bans.[29] Fish have been proven to accumulate microplastics in their liver, gills and gut with the consequential toxic effects.[30] We need to give consideration to the potential of detrimental economic impact on the Victorian fishing industry and take action to future-proof this industry. In 2015, the NSW Parliamentary Briefing paper was released exploring relationships between toxic chemicals and microplastics.[31]

   We need to move beyond briefing papers, to remedial and task-offensive action.

c. A recent study of tap water in countries around the world found that 83% of the samples were contaminated with plastic fibres[32].

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[21] *https://en.oxforddictionaries.com/definition/pollution*
[22] *http://www.ntn.org.au/wp/wp-content/uploads/2016/05/NTN-Contaminants-in-Marine-Plastics-Report-April-2016-.pdf*
[23] *https://www.ehp.qld.gov.au/waste/pdf/plastic-bag-discussion-paper.pdf*
[24] *Professor Richard Thompson, Plymouth university UK as quoted by the Guardian, 6th September 2017, https://www.theguardian.com/environment/2017/sep/06/plastic-fibres-found-tap-water-around-world-study-reveals*
[25] *UNEP Frontiers, 2016 report: Emerging Issues of Environmental concern, p.35 http://www.unep.org/frontiers/sites/unep.org.frontiers/files/documents/unep_frontiers_2016.pdf,*
26 Brennecke, D., Duarte, B., Paiva, F., Cacador, I., Canning-Clode, J. (2016) Microplastics as a vector for heavy metal contamination, Estuarine, Coastal and Shelf Science, 178, pp. 189-195
[27] *https://www.sciencedirect.com/science/article/pii/B9780128094068000062*

[28] *https://www.ncbi.nlm.nih.gov/pubmed/7734058*
[29] *http://www.abc.net.au/radionational/programs/scienceshow/heavy-metal-pollution-in-aquatic-sediments/3398826*
[30] *http://balticeye.org/en/pollutants/policy-brief-microplastics-in-marine-life/*
[31] *http://apo.org.au/system/files/53648/apo-nid53648-77366.pdf on toxic chemicals and microplastics*
[32] *https://www.theguardian.com/environment/2017/sep/06/plastic-fibres-found-tap-water-around-world-study-reveals*

d. Micro-plastics can attract bacteria found in sewerage and as nano-particles they can penetrate cells and organs.[33]

e. The risks micro-plastics pose to human health through consumption, bioaccumulation and biomagnification have not been determined, but in 2016 the European Food Safety authority called for urgent research.[34] The United Nations Environment Programme has cautioned that plastic broken down into small fragments may impact the reproductive processes of humans and wildlife.[35] Research is being conducted into the inhalational health risk of atmospheric micro-plastics.[36]

f. Microplastics have been called a *Pandora's Box*.[37] Leading scientists, researchers and conservation groups have called for strategies to include *serious regulation*[38] and *robust political measures*.[39] Until the health impact of repeated and cumulative human exposure to micro-plastics is known, there are calls for the precautionary principle to be followed. [40] This will require minimizing avoidable exposure to plastic pollution.

7. Expand Food Organics and Garden Organics (FOGO) collections.

Support Victorian councils, hospitals, schools and community groups to compost and better manage food waste and fund organic waste composting capabilities.

Reasons for ANMF (Vic Branch) position include:

a. New data from the National Oceanic and Atmospheric Administration of the US has shown that concentrations of atmospheric methane surged in 2018 and accounted for about a sixth of the atmosphere's capacity to trap heat, generating concern in the scientific community. [41] Organics in landfill release methane. Methane is 30x more potent a greenhouse gas than carbon dioxide[42]

b. A 2017 report commissioned by Sustainability Victoria found that a lack of recycling services for organic waste was one of the identified barriers to an optimised kerbside recycling system.[43]

c. According to the National Waste Report 2018, only 16 per cent of councils around Australia offer kerbside food organics recycling bins and 87 per cent of food waste went to landfill in 2016-17.[44]

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[33] *Dr Anne Marie Mahon at the Galway-Mayo Institute of Technology, as quoted by "The Guardian", 6th September, 2017; https://www.theguardian.com/environment/2017/sep/06/plastic-fibres-found-tap-water-around-world-study-reveals*
[34] *for human health and food safety "given the potential for microplastic pollution in edible tissues of commercial fish".*

[35] *http://staging.unep.org/yearbook/2011/pdfs/Press_Release_Final.pdf*
[36] *Professor Frank Kelly, an expert in environmental health from King's College London, giving evidence to the House of Commons Environmental Audit committee, http://www.independent.co.uk/news/science/microplastic-microbeads-microfibres-pollution-environment-audit-committee-mps-evidence-a7021051.html*

[37] *https://www.sciencedaily.com/releases/2016/07/160719093855.htm*
[38] *https://euobserver.com/health/140194*
[39] *http://balticeye.org/en/pollutants/policy-brief-microplastics-in-marine-life/*
[40] *https://euobserver.com/health/140194*
https://www.sciencedaily.com/releases/2016/07/160719093855.htm
http://balticeye.org/en/pollutants/policy-brief-microplastics-in-marine-life/

[41] *https://climatenexus.org/climate-change-news/methane-surge/;*
[42] *https://www.science.org.au/curious/earth-environment/methane*
[43] *Optmising Kerbside Collecting Systems: supporting evidence and analysis. Submission to Sustainability Victoria, 16th August 2017, MRA Consulting."*
[44] *https://www.insidewaste.com.au/index.php/2019/01/06/australian-councils-urged-to-recycle-87-per-cent-of-food-waste-sent-to-landfill/*

d. Food waste costs Australians 20 billion a year and half of that comes out of our homes [45]

e. Up to 50% of general household waste is FOGO and the amount of greenhouse gases produced by food waste in Australian landfill each year is equivalent to the emissions of Australia's steel and iron ore industries combined.[46]

f. Nutrients derived from organics remain locked in landfill and cannot be used again to grow plants and food. Returning nutrient high organic compost to the soil has the potential to reduce the use of chemicals.

g. Organics in landfill can contribute to contaminating leachate in ground water

8. ANMF (Victoria Branch) opposes the funding of Combustion or Thermal Waste to Energy technologies and does not regard this as a green or renewable energy. Our reasons include:

a. Burning waste for energy drives a cycle of extracting new resources from the earth, processing and shipping them, then permanently losing them. This creates demand for waste and can reduce demand for resource conserving strategies.

b. The federal government considers incinerating waste matter for energy as renewable clean energy, a position that has led to revenue stream for the industry through programs such as the Clean Energy Finance Corporation.[47]

ANMF (Vic Branch) supports initiatives that prioritize a transition to genuinely clean and renewable energy sources such as wind and solar. This transition can best be achieved through adopting a shared responsibility, including a just transition for the workforce that considers the predicament of existing workers directly affected, as well as consideration for future workforce planning, by supporting workers in exiting and retraining to a clean energy and decarbonized economy.

c. Environment Justice Australia point out that "best practice" air standards in Australia can be too low or not adhered to and are not adequately monitored and enforced. This means that the reassurance from facility operators that pollution level standards will be adhered to, provide little comfort.[48]

d. Plans are in place for Australian Paper to build a Waste to Energy Plant with implications for Melbourne's kerbside waste.[49] We urge caution and proper consideration for all the implications, including the community's health . We note reports from Environment Justice Australia and the expressed concern that Australian Paper has "demonstrated an inability to comply with existing licence conditions for its paper mill" including "consistent failures to comply with toxic air pollution limits, contaminated surface water discharges, offensive odours, and contamination of soil and groundwater." [50]

e. Combustion of materials such as plastic and PVC releases toxic pollutants including mercury, lead and dioxins that contain risk to human health. An enquiry conducted by the NSW Legislative Council into Energy from waste in 2017 recommended against a proposed

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[45] *BioBag World Australia director Scott Morton as quoted by WMMR Inside Waste, Issue 88/February-March 2019 p.11*

[46] *BioBag World Australia director Scott Morton as quoted by WMMR Inside Waste, Issue 88/February-March 2019 p.11*

[47] *https://www.cefc.com.au/media/files/household-waste-set-to-generate-clean-energy-as-cefc-finances-landmark-west-australian-project/*

[48] *https://www.envirojustice.org.au/our-work/community/air-pollution/resources/waste-to-energy/*

[49] *https://www.abc.net.au/news/2019-02-07/victorian-first-energy-from-waste-project-gets-green-light/10791686*

[50] *https://www.envirojustice.org.au/projects/plans-to-burn-rubbish-must-be-scrutinised-for-impact-on-health-and-environment/*

Eastern Creek incinerator for several reasons including air pollution and the benefits of waste minimisation.

9. Other waste and pollution issues government, business and communities could work together to address:

a. Reusable cup promotion

Promotion and Expansion of projects promoting reusable cups such as the Cityswitch cup project and Responsible Cafes.
Over 3 billion disposable hot drink cups and lids are handed across Australian counters in cafes and other take-away outlets every year.[51] Most are never recycled.

The 2017 ABC programs, "Trashed: the dirty truth about your rubbish" and "War on Waste" have drawn the waste and recycling industry into the public spot light and conversation. After the programs, *keep cup* sales enquiries increased by 690% and sales by over 400%.[52] The website responsiblecafes.org, a directory set up to help coffee drinkers find cafés in their local area that will reward them for being sustainable, has also seen a surge in cafes being listed on their site – jumping from 450 to 1800 – following the programs.[53]

b. Sugar tax

De-normalise the advertising, sale and consumption of high sugar content food/drinks and introduce a 'sugar tax.' The revenue from this should be dedicated to health education. The expected outcome of this action would be a co-benefit of reduced environmental waste.

c. Microbead ban

Strict enforcement of a microbead ban. Microbeads are an avoidable environmental contaminant given that viable biodegradable alternatives already exist such as crushed nut shells or even salt.[54]

d. Ban the mass release of balloons

There is precedent for the banning of mass balloon release as a means of environmental protection. NSW prohibits the mass release of balloons (>20) under the Protection of the Environment Operations Amendment (Balloons) Act 2000.

Balloons contribute to marine plastic debris representing a serious choking and digestion hazard for marine turtles and many other species. Biodegradeable latex balloons pose a threat to marine creatures searching for food sources. These pieces continue to be a threat to wildlife, and potentially to the human food chain, irrespective of the size, colour, texture or shape of the pollutant.[55]

The public need to be educated about the environmental risks including alternative ways of celebrating events and marking significant occasions.

[51] *https://www.cleanup.org.au/au/replace-that-disposable-cup*
[52] *https://www.hospitalitymagazine.com.au/keepcup-enquiries-jump-690-percent/*
[53] *http://planetark.org/news/display/1299*
[54] *http://www.iflscience.com/environment/scientists-call-ban-microbeads/*
[55] *https://www.fourthcrossingwildlife.com/WhatGoesUp-LanceFerris.htmc*