



Endangered Wildlife Trust Perspective on Single-use Plastic

The Endangered Wildlife Trust's (EWT) mission is to conserve threatened species and ecosystems in southern Africa to the benefit of all people.

This statement advocates the EWT's view on single-use plastic, with specific reference to the imprudent, large-scale consumption of this material. Specifically developed for its durability, water resistance, flexibility, versatility and convenience, plastic has become an indispensable resource for modern human living. Plastic packaging is used extensively across a variety of markets, from food to clothing to electronics. Single-use plastic is created for only one use, its useful lifespan is commonly short, more often than not it is never reused, and it is either difficult or impossible to recycle. The degree of biological degradation exhibited by conventional plastics like these is fairly negligible over time¹, thus these products linger almost indefinitely as waste in landfills, or end up as terrestrial, riverine or marine pollution; contrasting significantly with their short functional lifespans. These products include soft plastics such as drinking straws, plastic packaging, plastic utensils, plastic bags, product bags and disposable cups.

The rapidly increasing consumption of single-use plastic is a substantial long-term global concern, both environmentally and economically. Non-renewable petroleum-based chemicals, such as oil, gas and coal are the base chemicals used to make plastic. Thus, the production of plastic is energy and resource intensive, which contributes to global climate change². Not only is plastic waste unsightly, this pollution also represents an environmental hazard, frequently leading to injury or death of wildlife, and has cascading negative impacts to ecosystems and humans alike. Terrestrial plastic litter has the potential to leach harmful contaminants into the soil and subsequently into agricultural crops, with potentially negative consequences to human health³. Discarded plastic ending up as marine waste entangles marine animals, contaminates marine environments, and is often accidentally consumed by marine species, which can lead to asphyxiation, starvation and death^{4,5}.

There are at least seven important types of plastic in South Africa, and only a small number of these plastic types can be recycled adequately (Appendix 1). Generally, only certain types of plastics with a recycle logo and identification number are recycled in South Africa. Efficient recycling also depends on whether the area in question offers recycling services. Furthermore, even though certain plastics are recyclable, with the exceptions of polyethylene terephthalate (PET), high density polyethylene (HDPE) and low density polyethylene (LDPE), there is very little demand within South Africa for recyclable plastic. Importantly, plastic items cannot be recycled back into their original form; they can only be converted into lower grade plastics, which thereafter are not easily recycled. The threats associated with two of the most commonly used single-use plastic products are discussed below:



Plastic shopping bags

In South Africa, thin plastic bags were banned in 2003, and a tax on thicker plastic bags (of at least 30 microns) was enforced in order to reduce their consumption⁶. The ban aimed to halve the use of plastic bags from 8-billion units per year, though recent research suggests that the current tax on plastic bags in South Africa is too small to effect consumer behaviour significantly⁷. The lightweight properties of most plastic bags distributed by supermarkets and food outlets allows them to displace easily from landfill sites and garbage bins. This litter can be transported extensively – by wind or water – and causes multiple ecological problems. Issues include environmental degradation, wildlife entrapment, and damage to infrastructure. The blockage of storm water drains is especially a problem within South Africa's townships. Drain blockage and stagnant surface water can attract rodents and help the spread of water-borne diseases⁸. Marine and riverine species are particularly susceptible to the threats associated with plastic bags, which together with plastic fragments, are frequently misidentified as food resources (e.g. they are mistaken for squid), and consumed accidentally. This hinders digestion of natural food resources, leading to gut-blockage, asphyxiation, starvation, strandings and death of marine mammals and turtles^{9,10}

Microbeads

These solid, tiny plastic particles (typically < 1 mm in size) are used extensively in personal care and household cleaning products, such as toothpastes, exfoliating face and body scrubs, and washing powders. Microbeads have replaced traditional biodegradable exfoliating products, such as salt granules and ground nut shells. These plastic beads are washed down the drain and eventually make their way into rivers, lakes and, ultimately, the ocean. These tiny particles have the potential to adsorb persistent organic pollutants, and become incorporated into the food chain, as microplastics are consumed by various marine and riverine species¹¹. The ingestion of microplastics can demonstrably affect an organism's reproductive success, feeding, growth and movement, as these particles can be taken up into body tissues and fluids¹²⁻¹⁴. There is currently no legal requirement in South Africa for manufacturers to clearly identify products containing microbeads on their packaging. This makes it both difficult and time-consuming for consumers to make informed choices regarding products containing microbeads.

How can we reduce our consumption of single-use plastics?

The EWT advocates making the following small lifestyle changes which, when implemented routinely on a large-scale social basis, could significantly reduce South Africa's single-use plastic consumption and the associated environmental threats of plastic waste and pollution:

- a) **Choose recyclable packaging:** By buying products contained in recyclable packaging, you will send a powerful message to product manufacturers to distribute and package their products in an environmentally-friendly manner.



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- b) **Buy in bulk:** Buying products in bulk reduces the consumption of plastic packaging and also saves you money. You can easily decant products – including both food and household products – into smaller reusable containers at home.
- c) **Reduce consumption:** Always avoid purchasing unnecessary single-use plastic products, and when necessary, replace them with environmentally-friendlier alternatives. For example, always make sure to take reusable shopping bags with you when shopping and never pay for single-use plastic carrier bags. See Appendix 2 for more examples of common single-use plastic products and possible substitutes you can use.
- d) **Reuse:** When alternative products are unavailable, inconvenient or expensive, plastic products (designed for single-use) can be reused a number of times if washed out after use. These include plastic bags, bottles, cutlery, etc.
- e) **Choose wisely:** Select products packaged using non-plastic materials – for example glass jars and bottles, paper bags, cardboard boxes. Avoid frozen foods, or fruits and vegetables which have been peeled, chopped and packaged, when fresh unpackaged produce is available. Although, you might perceive these products as more convenient and time-saving, they are generally more expensive and packaged using non-recyclable plastic. Choose biodegradable plastic products when available, for example biodegradable garbage bags.
- f) **Regenerate:** Up-/down-cycle plastic products into something else, for example flower pots.
- g) **Bring your own container:** Often restaurants have no problem serving take-away foods into your own personal containers as it saves them money on packaging. Additionally, if you take re-useable containers to food markets suppliers will often package your produce for you in the containers you bring.
- h) **Make your own:** Products, such as juices, smoothies and even cleaning products, can be made at home, rather than bought, thus lowering the consumption of non-reusable or non-recyclable plastic bottles. Not only is this a healthier option, as you avoid excess sugar in drinks and harmful ingredients in cleaning products, but it is also cheaper. See http://eartheasy.com/live_nontoxic_solutions.htm for more information.
- i) **Package cautiously:** Think carefully about how you package your lunches – use re-useable containers as much as possible to limit the usage of cling wrap, plastic bags, etc.
- j) **Be aware:** Find out which plastics can and cannot be recycled and what types of plastics your local recycling drop-off facility will accept.
- k) **Buy refills:** The lids of plastic spray bottles and products with squeezable lids are unlikely to be recycled as they are made from a combination of plastics and other materials such as a metal spring. By buying the product's refill option, you can reuse your spray and squeezable bottles and save some money too.



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- l) **Read ingredient labels:** Avoid body and face scrubs, shower gels, toothpastes, sunscreens, washing powders etc. containing microbeads (look for polyethylene, polypropylene, polymethyl methacrylate, polyethylene terephthalate, or polystyrene in the list of ingredients). As an alternative to shower gels packaged in plastic bottles or tubes, rather choose soap bars packaged in wax paper or cardboard boxes.

How can we make it easy for ourselves?

- a) Always keep reusable shopping bags in your car or handbag. Use sticky notes or smartphone apps, such as reminders or calendars, to remind you to take your shopping bags into the store with you.
- b) Be aware of the products you are using and always ask yourself whether your purchase is a necessary use of single-use plastic.
- c) Spread awareness in your community and with family members of the dangers associated with single-use plastic and advocate the possible alternatives.
- d) Get involved in “green” schemes offered by retail outlets. These often include loyalty benefits as a bonus.

How can retailers and businesses assist in the reduction of single-use plastic consumption?

- a) Erect notices at the entrance of supermarkets asking whether your customers have remembered to bring in their shopping bags from the car.
- b) Offer discounts, rewards or “green points” to customers who bring their own re-useable bags or coffee cups.
- c) Always ask first whether the customer has brought their own shopping bags before first offering them the option of purchasing reusable shopping bags. Single-use plastic bags should only be offered only as a last resort. Similarly, ask your customers whether they require a plastic straw or lid, instead of providing one as the default option.
- d) Do not provide single-use products to customers that are going to “eat in” at restaurants or fast food outlets.
- e) Ensure that re-useable shopping bags are conveniently available for sale at the checkout point in a supermarket.
- f) Label products accordingly to assist consumers in the identification of recyclable products and packaging, as well as products that do not contain microbeads.

In conclusion, the EWT does not support the use of single-use plastic products, and instead encourages an active and committed attitude to recycling, and a thoughtful and conservative approach to the use of single-use plastic materials. Policies and regulations should be established and enforced to ensure that products are adequately labeled in order for consumers to make informed, environmentally-friendly choices regarding plastic products. Producers, consumers, retailers and governments are all responsible for the products and



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resources in use and circulation, and we all need to work together to ensure a reduction in the consumption and pollution associated with single-use plastic.

*The EWT bases its perspectives on the best available information and data available at the time.
Our positions and opinions may change as more information and data become available.*



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Box 1. Strategic examples of how retailers, governments and businesses can contribute to the lowered consumption of single-use plastic

- In 2006, China’s voluntary “No plastic day” scheme resulted in a 40% decline in the use of plastic bags.
- In Malaysia, certain shopping outlets allow customers with re-useable shopping bags to take priority in shopping queues, over those who do not.
- In the United Kingdom, Tesco offers customers who use reusable shopping bags a green loyalty points rewards scheme, and the first “Plastic Bag Free Day” was held in 2009.
- In the United States, CVS Pharmacies developed a rewards scheme called “Green Bag Tag,” whereby customers purchased a Tag, which was then attached to a re-useable shopping bag. When customers used the bag in store they received a \$1 reward for every fourth shop. In some parts of the world, such as India, employment schemes have been developed to source plastic bag alternatives, such as the sewing of reusable cloth bags.






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Appendix 1. Types of plastic and their associated recycling properties in South Africa

Symbol	Plastic Type	Examples	Recycled into
 PET	PET – POLYETHYLENE TEREPHTHALATE	Water, soft drinks, juice, detergent and oil bottles, as well as a variety of food product containers and packaging	Hollow-fibre filling for jackets, duvets, pillows and sleeping bags. Green bottles become building insulation
 HDPE	HDPE – HIGH DENSITY POLYETHYLENE	Milk bottles, cleaning products, cosmetics, toiletries and thin plastic bags	Bins, buckets, detergent containers, fencing, pipes, plastic timber, plastic toys and plastic chairs
 PVC	PVC – POLYVINYL CHLORIDE	This is considered “difficult” plastic and its use is currently being phased out, and replaced with PET	Unlikely to be recycled
 LDPE	LDPE – LOW-DENSITY POLYETHYLENE	Rubbish bags, sliced bread bags, frozen vegetable bags, building film, squeezable bottles, cosmetic tubs, bubble wrap	Bin liners, pallet sheets, irrigation piping, yoga mats, containers and building film
 PP	PP - POLYPROPYLENE	Bottle lids, ice cream tubs, yoghurt tubs, margarine, feta, microwave dishes (ready-made meals), kettles, garden furniture, lunch boxes, packaging tape	(Uncommonly recycled in SA). Pegs, bins, pipes, pallet sheets, oil funnels, car battery cases and trays
 PS	PS - POLYSTYRENE	High impact: coat hangers and yoghurt cups Foamed: meat and vegetable trays	(Uncommonly recycled in SA) Picture frames, curtain rails, skirting boards, stationery. Generally, are not recycled in SA
 OTHER	VARIETY OF OTHER PLASTICS	Silvery packets e.g. Crisp packets	Generally, are not recycled in SA
	UNMARKED PLASTICS	Most other plastics with no logo. For example: multi-laminated plastic foils, such as packaging for bacon, pet food pouches, soup pouches	Generally, are not recycled in SA



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Appendix 2. Unnecessary single-use plastic products and appropriate alternatives

Unnecessary plastic product	Description	Alternative actions
1. Single-use plastic shopping bags	Distributed in their billions and are often used for only a few minutes before they are discarded.	Re-useable polypropylene fibre “green” shopping bags, paper bags (although these are often not reused and may not be as durable), cotton bags.
2. Plastic drinking straws	Often used unnecessarily. Simply tell the waitron at a restaurant or retail outlet that you do not need a straw.	Try stainless steel or glass straws that can be purchased and carried with you.
3. Chewing gum	Mostly made from polyvinyl acetate.	Plastic-free chewing gum, peppermints.
4. Plastic water bottles	Often used only once, and although they are often recyclable, still frequently end up in landfills.	Re-useable plastic, glass, aluminium or stainless steel water bottles.
5. Single-use plastic diapers/nappies	Single-use plastic nappies expensive and also contribute substantial quantities of plastic to landfills.	Cloth nappies.
6. Plastic food wrap, e.g. Cling wrap.	Often used to keep food fresh. Also used extensively at airports to wrap suitcases for security reasons.	Re-useable, airtight glass or plastic containers with lids, which keeps food fresh. Use reusable locks to secure suitcases at airports.
7. Take-away coffee cups, lids and plastic cutlery	Most lids are non- recyclable and many “cardboard” cups are sprayed with a thin layer of plastic to ensure that they are water resistant. This plastic cannot be removed from the paper cups in order for them to be recycled.	Re-useable transportable coffee cups and cutlery. Re-useable cups are accepted by most coffee outlets; some outlets even offer reward schemes when the customer brings his/her own cup.
8. Polystyrene packaging for meat and take-away food from fast-food outlets and restaurants	Polystyrene is one of the main components of marine debris. This material is lightweight, thus floats easily through water sources and is resistant to breakdown by sunlight.	Take re-useable containers with you when you order take-away food. Buy meat and fruit products from local butchers and markets, where products can be packaged on site with paper or into re-useable containers.
9. Disposable plastic lighters	These plastic devices are very difficult to recycle as they consist of a combination of materials.	Matches, refillable metal lighters.