



WAZA

*World Association
of Zoos and Aquariums*

A short guide

How to reduce single-use plastic at your zoo or aquarium

Compiled by the Task Force on Single-Use Plastic of the WAZA
Conservation and Environmental Sustainability Committee

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Aim of this short guide

This short guide was compiled by the WAZA Task Force on Single-Use Plastic to help your zoo and/or aquarium implement the policies and changes needed to reduce the use of single-use plastic. Regardless of the location of your zoo and/or aquarium or the size of your budget, this guide contains simple steps to help you start changing the way your organisation thinks about, offers and uses some of the most common single-use plastic items.

Background

Since the 1950s, the production of plastic has outpaced that of almost every other material. Single-use plastics, or disposable plastics, are used only once before they are thrown away into landfill or recycled (although many of them are not recyclable or are difficult to recycle). These items include plastic bags, straws, coffee stirrers, soda and water bottles, takeaway coffee cup lids and most food packaging.



What about recycling?

World-wide less than 15% of plastic items are recycled, additionally, plastic can only be recycled back into its original polymer a limited number of times, so ultimately it will leave the recycling cycle. Although plastic does not biodegrade, it will degrade into tiny



particles after many years. Our ability to cope with plastic waste is already overwhelmed. Only 9% of the nine billion tonnes of plastic the world has ever produced has been recycled. So, while recycling helps to ease the problem of pollution somewhat, we ultimately need to use less plastic and move towards environmentally sustainable products and behaviours, including circular economies.

Why is plastic a problem?

Plastic waste causes a wide range of problems when it leaks into the environment. Plastic bags can block waterways and exacerbate natural disasters. By clogging sewers and storm water drains and providing breeding grounds for mosquitoes and pests, plastic bags can increase the transmission of vector-borne diseases like malaria. Plastic materials, particularly plastic bags, have been found blocking the airways and stomachs of many terrestrial and aquatic animal species. Plastic is often ingested by turtles, marine birds and marine mammals who mistake it for food.

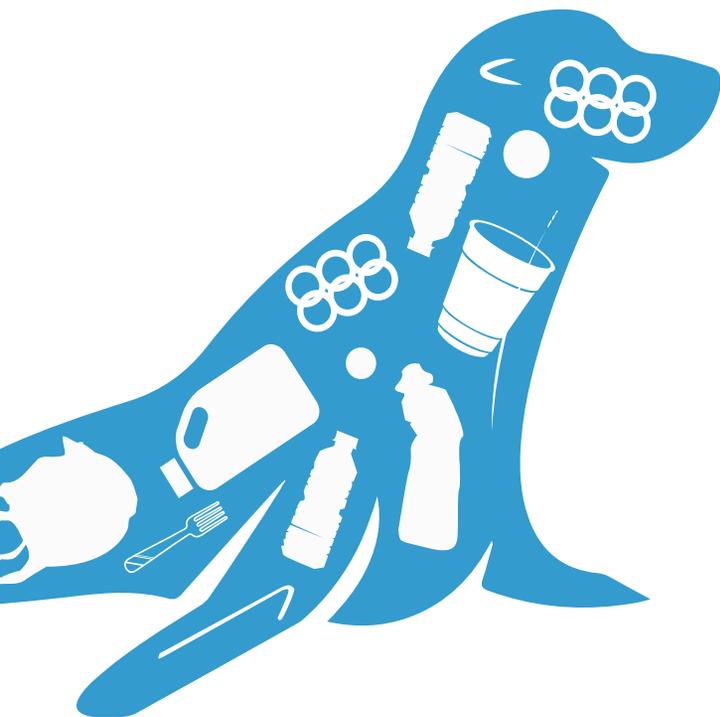
These animals die of hunger. Thousands of marine animals become entangled in discarded plastic each year, and many of them die as a result. Microplastics are also entering the food web – via filter feeders.

The role of zoos and aquariums

Besides affecting wildlife, plastic also negatively impacts humans. There is evidence that microplastics and the toxic chemicals added during the manufacture of plastic might transfer to animal tissue during the use of plastic, such as carrying meat in plastic bags; or leach into ground and oceanic water when buried deep in landfills, eventually entering the human food chain. Some of these compounds, which include Bisphenol-A (BPA) and Phthalates, have been found to alter hormones or have other potential human health effects such as reproductive abnormalities, higher child obesity levels and changes to foetal brain development.

Zoos and aquariums have a critical role to play in the conservation of biodiversity and wildlife, both in the field and within their own facilities. They also strive to educate people on the need to protect the ecosystems upon which wildlife depends. With this in mind, we in the zoo and aquarium community must actively champion the appropriate use of single-use plastic to ensure that it does not have a detrimental impact on the environment. We should aim to raise awareness of how the daily actions of every individual, including our staff, visitors and suppliers, can have a direct impact on biodiversity and to work towards converting this awareness into positive actions. Our underlying motivation for undertaking these initiatives should stem from a deep concern for the future of nature.

Zoos and aquariums are respected and trusted voices for conservation. This provides us with a unique opportunity to be heard about the issue of plastic pollution – but it is not enough to be a voice, that voice needs to be backed by real action. And real action can be good for business too. Implementing sustainable initiatives can reduce operating costs, enhance employee engagement, attract new customers, enhance community relations, drive innovation and create marketing opportunities. Our communities expect us to lead the way in the drive for sustainability. We have a corporate responsibility to act in the best interests of society – and nature.



In October 2017, the World Association of Zoos and Aquariums (WAZA) signed a Memorandum of Understanding with the United Nations Environment Programme (UNEP). One of the goals of that memorandum is a commitment from both organisations to tackle marine plastic pollution. As a starting point WAZA is encouraging all its member zoos and aquariums to join these efforts.

The WAZA Task Force on Single-Use Plastic, has the following goals:

1 By January 2020, all WAZA member zoos and aquariums will sign a pledge as part of their commitment to reducing single-use plastic in their consumer chain (i.e. food and beverage services and merchandise operations). This pledge should be sent to WAZA to assist in the evaluation of the impact of this initiative and can also be displayed to show visitors the facility's commitment .

Additionally, WAZA members will:

2 Eliminate the use of plastic and biodegradable (PLA) straws and single-use takeaway plastic bags on site by the end of 2020.

3 Eliminate or significantly reduce single-use plastic beverage bottles and single-use plastic catering products such as cutlery, plates and cups by the end of 2023.

4 Provide and showcase to visitors innovative alternatives to single-use plastic and encourage changes in consumer behaviour.

Implementing an institutional policy on single-use plastic

Developing an institutional policy on single-use plastic provides direction to leadership and clarity to staff when dealing with activities that concern single-use plastic items. Such a policy helps to identify tasks, roles and processes associated with a reduction or elimination of single-use plastic.

It would be helpful to find out what your local, regional or national legislation says about single-use plastic, or waste in general. Aligning your policy with local or national policies will make it easier to implement.

A template of an internal single-use plastic policy is provided. We invite each institution to adapt this policy in a way that is relevant and effective in their respective context.



A template for your organisation

SINGLE-USE PLASTIC POLICY

<YOUR ORGANISATION'S NAME>

PURPOSE

Why do we need a single-use plastic policy?

Include the compelling evidence of the impact of single-use plastic globally and in your region. Emphasise the urgent need to eliminate and/or reduce single-use plastic. If any of your species are threatened in the wild by the impact of single-use plastic you have a good opportunity to create a powerful link between your animals and your visitors.

Your organisation's stance and linkages to single-use plastic.

Include any campaigns you have or are developing. Include your commitment and links to other related policies or standards. Include also any reference to best practice or legal or social obligations. You could include a link to WAZA and mention the collective power of all WAZA members.

Provide a purpose for this policy/standard.

E.g. The purpose of this policy on single-use plastic is to:

- Provide guidance to allow consistency and control over the use of single-use plastic
- Demonstrate accountability and best practice
- Provide guidance on sustainable plastic procurement through contracts, retail, partnerships and campaigns
- Ensure consistent messaging to staff and visitors.

RESPONSIBILITY

Who oversees the policy and ensures resources are in place to make it happen?

SCOPE

State your scope.

Include what you have control over. You may need to define a boundary. This may be important because some organisations do not have control over the whole site (outsourced shops or restaurants) – explain where you have control and how you will exercise that control. Even if your restaurant/shop is outsourced, as the landlord you have the right to include a clause in the rental agreement / contract about single-use plastic. If you have no control over a part of the premises, make it clear in the policy.

COMPLIANCE

State who must comply with the policy.

E.g. Staff, volunteers, suppliers and contractors should be included. Will you include sub-contractors, will you include outsourced functions (e.g. food services, cleaning, etc)? If you are the landlord, you can include clauses about plastic use.

OBJECTIVES

State your objectives and how this policy supports the implementation and progress of other strategies.

At a high level this policy will support the UN Sustainable Development Goals. It may also support other policies in your organisation (e.g. Conservation Policy, Welfare Policy).

E.g. This policy on single-use plastic is required to support the implementation of *Your organisation* environmental sustainability strategies:

- **Environmental Sustainability Policy**
- **Zero Waste to Landfill**
- **Sustainable Procurement**
- **Environment Protection**
- **Green Team Activities**

DEFINITIONS USED FOR THIS POLICY

Definitions to clarify some key words.

Single-Use Plastic: Any plastic that is designed to be only used once and disposed. It includes but is not limited to plastic bags, bin liners, takeaway catering wares, packaging material (e.g. expanded polystyrene and plastic fillers), water and soft drinks bottles, and cling wraps.

Straws: All straws including plastic, compostable or degradable and paper.

Balloons: Any rubber, biodegradable, plastic or foil balloons.

Compostable: Any plant-based plastic that can be composted.

Laminated Paper: Any paper that is plastic coated on one or both sides.

Retail Food Packaging: All plastic packaging for pre-packaged food products sold or distributed.

General/Back of House Food Packaging: All plastic packaging for the delivery, handling and preservation of food products in all retail/catering, staff and animal kitchens.

General Packaging: All non-food related plastic packaging used for the delivery, handling, and protection of all goods.

Circular economy: An alternative to a traditional linear economy (make, use, dispose). Resources are kept in use for as long as possible, with the maximum value being extracted whilst in use, then recover and regenerate products and materials at the end of each service life.

Add any other terms specific to your context.

POLICY FOCUS

State the rules here and any exemptions. Clearly state what can or cannot be used. To complete this section, it is recommended that an audit of all single-use plastic is conducted. A template for the audit is available for use and for ongoing tracking and prioritising. Create an action plan that starts with the items that are the easiest to eliminate. For each item determine how much is used, where it is used, who uses it, alternatives available and by when it should be eliminated.

This is a draft of a commitment (please modify as required):

To help protect terrestrial and marine wildlife, <your organisation's name> will remove all non-essential* single-use plastic from our organisation by 20**.

Staff and contractors must ensure that the following requirements are met:

- Single-use plastic bags are not to be used, sold or distributed for any purpose; or brought on-site
- Single-use plastic disposable cups and lids, plates, bowls, cutlery and take away food containers are not to be used, sold or distributed (exemptions on compostable wares)
- Plastic bottled water and soft-drinks are not to be provided, sold or distributed, or brought on-site
- Balloons are not to be used, sold or distributed
- Plastic straws are not to be used, sold or distributed. (With the exception of approved reusable straws sold at outlets for people in need of them or on request only for approved straws that are not single-use plastic)
- Laminated paper is not to be used, distributed or brought into our properties

Type of single-use plastic	Possible area of use	Policy direction	Timeline	Alternative replacement
Plastic bags	Retail – purchase of goods, takeaway food, events, campaigns and publications	Do NOT use	Note WAZA's commitment is to the end of 2021	Reusable bags
Disposable cups and lids, plates, bowls, cutlery and takeaway food containers	Retail – food outlets and events	Do NOT use	Note WAZA's commitment is to the end of 2023	Compostable wares for composting or washable crockery and utensils
Individually wrapped condiments	Retail – food outlets and events	Do NOT use	Note WAZA's commitment is to the end of 2021	Dispensing containers
Plastic bottled water and soft-drinks	Retail – food outlets, events and campaigns	Do NOT use	Note WAZA's commitment is to the end of 2023	Reusable plastic bottles and recyclable cans, cartons and glass bottles and compostable containers. Drinking fountains.
Straws (all types)	Retail – food outlets, events and campaigns	Do NOT use	Note WAZA's commitment is to the end of 2021	Reusable metal straws and approved non-removable straw as part of drinking bottle sold in our shops
Vet supplies	Medication containers, delivery packages	Use the waste hierarchy. Avoid if possible. Supplier reduction and takeback if possible. Recycle if unavoidable.	Ongoing	Not applicable
General packaging	Goods procurement by retail shop, staff and contractors	Use the waste hierarchy. Avoid if possible. Supplier reduction and takeback if possible. Recycle if unavoidable.	Ongoing	Not applicable
Balloons	Celebrations	Do NOT use	Immediate	Non-harmful bubbles
Chips, sweet packets	Food	Ensure appropriate disposal	Immediate	No current alternatives

Communication

Communicating your commitment to eliminating single-use plastic is critical throughout the process. From the moment you decide to embark on this journey it is recommended that you communicate with your staff – getting their support is essential for the success of the initiative. Personal and team communication is the best – show your enthusiasm and build a team of keen supporters who can then become the voice of the initiative amongst the wider staff body. Giving staff a chance to ask questions and engage fully are essential for support. Getting the support of your Board or Directors is also crucial.

Timing and framing are important – you know your Board – what matters to them and what they are likely to object to, frame your pitch carefully taking these into account. Once you have started the journey and have the support of your staff and your Board, the communication with suppliers, partners, vendors, tenants, and others can start. This communication should stress why the decision has been taken, how it will impact the various stakeholders and how the process will roll out, giving clear time frames. Communication with visitors is another critical step that can be achieved creatively as the roll out of the initiatives takes place. Communication with the wider community is then advised – but only once you know that the initiative is really having an impact.

Creating partnerships

The zoo and aquarium community cannot fight the single-use plastic challenge without collaborations with like-minded organisations in the private sector, academia, government and civil society. Each partner brings different priorities, resources and competencies. Partnerships are also critical to amplifying the impact of initiatives, increasing the level of innovation applied to solving long-standing challenges, as well as building mutual trust, accountability and a new social contract between business, governments and civil society.

In this regard, the **Aquarium Conservation Partnership (ACP)** is a first-of-its-kind collaboration created to increase the collective impact of aquariums in the United States on ocean and freshwater conservation. ACP's primary goal is to address the growing global challenge of ocean and freshwater plastic pollution.



One of ACP's objectives is to accelerate market change toward sustainable alternatives to single-use plastic. This is done by collaborating with each other, as well as with vendors and suppliers to make changes for the health of our ocean, rivers and lakes. These changes include offering products and packaging made of alternative materials, installing water refilling stations, and messaging to visitors about the reason behind these changes. We also hope that by showcasing innovative alternatives to single-use plastic in our institutions, we can help increase demand for these products in the broader marketplace.

In 2017, ACP aquariums announced a business commitment to reduce single-use plastic at member institutions. All ACP aquariums pledged to immediately eliminate single-use plastic takeaway bags and straws and eliminate or significantly reduce plastic beverage bottles by 2020. In 2019, ACP aquariums took their commitment to reducing plastic pollution to the next level by committing to replace all single-use plastic tableware with sustainable alternatives by 2021. By 2021, these aquariums will significantly reduce or eliminate single-use plastic packaging for retail products and reduce single-use plastic in back-of-house operations.

This work is guided by a Business Operations Work Group and supported by a consultant with expertise in plastic solutions.

In the zoo world, **Singapore Zoo** has embarked on multiple initiatives with local partners to address the single-use plastic issue, including:

- Jointly organising a sustainability design competition with a local polytechnic, to redesign single-use takeaway packaging.
- Becoming a signatory of the Singapore Packaging Agreement, a joint initiative by government, industry and NGOs to reduce packaging waste in Singapore.
- Becoming a signatory of WWF Singapore's Plastic Action and the Climate Action SG Alliance's Plastic Purge pledges and making a long-term commitment to eliminate unrecyclable single-use plastic from operations.
- Retailing co-branded drinking water made from recycled paper packaging with a local supermarket chain as a more eco-friendly alternative to plastic bottled water.



How to overcome some of the reported barriers to reduce single-use plastic

The following are some of the common reasons for not reducing or eliminating single-use plastic, and some ways to overcome these barriers:

1. *“Our visitors prefer existing products”*

.....

Are you sure that this is the case? They may prefer existing products, but if visitors are informed of the environmental benefits / costs (e.g. through a campaign) their preference may change.

Have you provided alternatives for your visitors? E.g. alternatives such as glass bottles and aluminium cans could be used to replace plastic bottles. Also consider post-mix and provide incentives (e.g. reduced costs to refill or free refills).

What are the barriers to them using alternative products? Understand and remove the barriers e.g. the barrier of purchasing a reusable bag can be removed by offering them a small discount on purchases when reused at your shop.

Perhaps a short survey with your visitors will help you to uncover the barriers to change and help you to highlight some benefits.

2. *“We cannot find vendors for replacement products”*

.....

Have you really questioned your existing suppliers or looked out of your usual supplier list? Often the replacement products are out there. We have just not asked the right questions. If your procurement is large, use a public tender or request for quotes, and specify your requirements. Spend some time with your procurement staff, so that they understand the importance of procurement in this process.

Have you asked other organisations what they use?

Perhaps task some passionate members of your team (e.g. create an official working group) to assist by identifying alternative suppliers.

3. *“Changing products is too expensive”*

.....

Try looking at the longer term. Locking in a longer contract (or exclusive contract with one supplier) and pooling procurement with other suppliers can reduce costs. The products themselves may be a bit more expensive but your social license to operate and credibility increases, which will result in longer term financial viability as an organisation.

4. *“We have a contract with a beverage provider that uses plastic bottles”*

.....

Inform the supplier of your change in policy and specify your timelines for change. Your provider (if they want your business for the long term) will want to work with you during the term of their contract. For new beverage contracts, be sure to specify the new requirements.

5. *“Our staff or board of directors is not supportive”*

.....

Start with the Board – explain to them your role as a leader in sustainability, your responsibility, etc.

Use the WAZA MoU with UNEP as leverage.

Leverage your staff’s emotional connection with their animals to build their support of this policy. Explain the emerging trend in awareness of the impacts of single-use plastic and your organisation’s social license to operate.

6. *“It would mean a loss of revenue”*

.....
Can the revenue be made up elsewhere? It may mean you now sell more reusable items or post-mix drinks etc. The needs of your visitors do not diminish; you are just changing the mode of delivery.

Will your institution not lose more in the long run through reputational damage?

7. *“We don’t run the restaurants/gift shops ourselves”*

.....
Use existing arrangements or contracts to your best advantage for change. Make sure that new contracts are tighter in terms of single-use plastic.

8. *“Security reasons: glass bottles can be dangerous if smashed.”*

.....
Ensure that adequate signage is available of correct handling of glass. Ensure you have safety plans in place e.g. clean-up kits and staff able to respond. Glass bottles are used extensively worldwide and continue to be used without these concerns.

9. *“Infrastructure changes will be required to provide enough water refill locations around the site. Would need infrastructure/human resources to wash dishes if we used them instead of disposable items”*

.....
This process does not need to happen at once – try a phased approach. Seek funds through grants, etc., to fund some of these initiatives (e.g. through your government or foundations).

10. *“Limited options for government zoos (we have restrictions on which providers we can choose, usually we must choose the cheapest option)”*

.....
This is a tricky one – is there a way to convince your local municipality / government agency to join you in your mission to limit plastic use? Start with small steps by changing what you can and then try to become more ambitious. Most governments are generally aware of this issue, hence it may be viable to seek an exemption or request a case study project to start the change in policies. Plastics is a high-profile issue and perhaps your local government could do with some good media.

11. *“Local laws prevent a change”*

.....
Why are the laws there? Could you lobby to change the laws, and in doing so, become leaders in the community. You could also pool resources with like-minded organisations to drive that change.

12. *“The results of a detailed science-based assessment of various packaging options in preparation of a cold beverage tender showed that the environmental impacts from cradle to grave or cradle to cradle (if recycled) is lower for PET packaging than for either glass or aluminium cans; which are more energy intensive to produce and emit more emissions during transportation.”*

.....
While energy use is better for plastic, the detrimental and long-term effects of plastic pollution for both wildlife and humans outweigh the energy and emission impacts.

13. “There are no local recycling facilities”

Almost all countries have some form of plastic recycling, even most developing countries have informal waste collection systems. Perhaps you could partner with a local community group and support a new recycling or waste management system.

14. “Our government already has effective plastic recycling programmes”

Globally plastic generation rate is higher than its recycling rate. Simply recycling is not enough and there is a need to move towards a more circular economy and away from disposable products.

Engaging visitors and promoting behaviour change

The international movement away from single-use plastic has demonstrated the collective power of the mainstream media, social media, non-governmental organisations and individuals to change business practice and individual behaviour. Interestingly, the straw being removed from the turtle and the ‘plastic-filled’ whale found in Norway both produced emotionally charged images based on individual animals. With exhibits and experiences based around individual animals, zoos and aquariums have the potential to engage visitors emotionally and cognitively and thereby empower visitors to make the necessary changes in behaviour required to address the issue of single-use plastic.

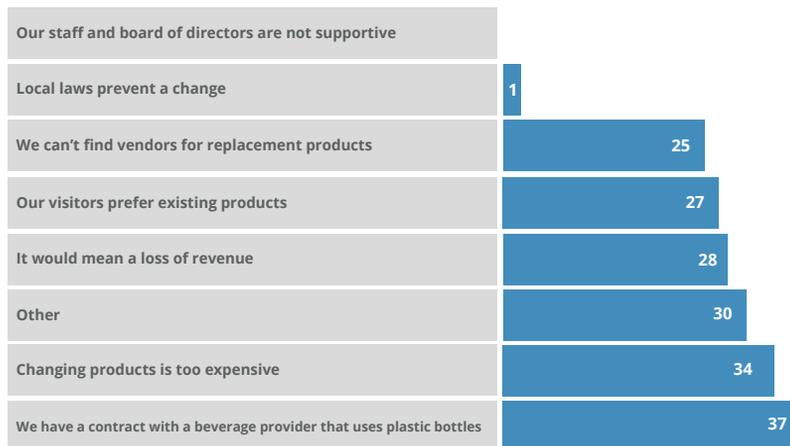


Figure 1. The obstacles members face in reducing or eliminating single-use plastic. Responses from WAZA Members in a survey on single-use plastic in 2018.

Around the world, aquariums and zoos have the potential to positively impact the conservation awareness and environmental behaviour of millions of people annually. The international awareness about single-use plastic means that visitors to zoos and aquariums will often be ‘primed’ before their visit and will often expect their visit to, in some way, address the issue of plastic use and pollution.

Zoos and aquariums have a responsibility to address this expectation and can use this prior awareness as a base from which to build greater awareness and support environmentally responsible action.

Zoos and aquariums can therefore play a supportive role in local, national or international campaigns. Or, if local and national initiatives are absent, can act as a catalyst to initiate campaigns that can then become national or international.

For this potential to be realised, it is essential to understand which features of the visitor experience contribute towards the adoption of environmentally sustainable behaviour. Research into aspects of the experience that support the adoption of more environmentally responsible behaviours after a visit is increasing. These studies provide valuable recommendations on how to design the visit experience, including exhibits, presentations and interpretation, to support post-visit environmentally responsible behaviour.

The aim of this section is not to provide details on how to create behaviour change campaigns, but rather to provide an opportunity for zoos and aquariums to explore options, share ideas and find further information.

Internationally many zoos and aquariums have launched single-use plastic campaigns. If you need inspiration why not have a look at these campaigns. They are filled with innovative ideas to get you started.

The variety amongst these campaigns highlights the need to ensure that behaviour change campaigns are contextualized and relevant to the local context. While countries as diverse as Germany and Bangladesh, Uganda and Canada have all banned plastic bags, the response has been highly variable based on the legislative capacity of each country to enforce the ban, the economy of the country, cultural attitudes towards regulation and personal locus of control. This highlights the importance of designing behaviour change campaigns that are customised to the local context and are economically, socially and culturally appropriate.

AZA

www.aza.org/parting-with-plastic

Houston Zoo

www.houstonzoo.org/save-wildlife/take-action/plastic-recycling

Vancouver Aquarium

www.vanaqua.org/explore/exhibit-oceanplastic

Detroit Zoo

detroitzoo.org/press-release/detroit-zoological-society-weans-visitors-off-the-bottle

Point Defiance Zoo and Aquarium

www.pdza.org/care/plastic-free

Two Oceans Aquarium

www.aquarium.co.za/content/page/environmental-campaigns-landing

Zoos Victoria

www.zoo.org.au/fighting-extinction/sustainability

Singapore Zoo

www.wrs.com.sg/en/protecting-wildlife/go-green-for-wildlife/saying-no-to-plastic.html

Aquarium Conservation Partnership

ourhands.org

Start at Home

A final note of caution for any visitor awareness campaign directed at single-use plastic.

Do not start a campaign asking visitors to change their behaviour unless you have started with an internal process to reduce or eliminate single-use plastic on the site, amongst your staff and even with your suppliers. Visitors are quick to spot inconsistencies and will highlight any discrepancies between what a zoo or aquarium says should be done and what is really done. We are all on a journey to become more sustainable and to behave in a way that is better for the environment, let us ask our visitors to join us on that journey.

Case Studies

South Carolina Aquarium (United States of America)

The South Carolina Aquarium is proud to be a leader in the elimination of single-use plastic, and we believe personal commitment is the core factor for institution-wide progress. Years ago, Lee Baldonado, Building Operations Manager, noticed litter on a beach next to the Aquarium. When he went to clean it up, fellow employees joined. From there, this grassroots campaign blossomed into a company-wide passion for conservation, starting with staff litter sweeps and a composting programme.

In 2016, we removed drinks sold in single-use bottles from the cafe and vending machines, eliminating 46,000 bottles of plastic waste per year, which has grown to all Aquarium events now being free of single-use plastic. As part of the Aquarium Conservation Partnership (ACP), the South Carolina Aquarium has eliminated plastic bottles, straws and

Additionally, the Aquarium has admitted over 30 sea turtles with plastic impactions and entanglements into their Sea Turtle Care Center™, observing first-hand the impact of marine debris on the ocean. This has inspired us to commit to being completely free of single-use plastic by the end of 2020. As Lee puts it;

“When I look at what I want the world to be when my kids are my age, I need to take action now.”

Wildlife Conservation Society (WCS) New York Aquarium (United States of America)

Raising Awareness – Spurring Action. The Conservation Choices gallery in the New York Aquarium’s (NYA) Ocean Wonders: Sharks! Exhibit highlights the impact of plastics in our oceans. We have also integrated this messaging into our educational programming across multiple platforms – teacher trainings, student groups, and campaigns.

Give a Sip Campaign. NYA is collaborating with New York City Council bill sponsors and advocates to lead a campaign to pass Int. 936, a bill that would require businesses to offer single-use plastic straws upon request. We are working closely with the restaurant industry and disability community representatives to advocate for this inclusive legislation.

NYA youth leaders and online advocates have helped us build a coalition of 175 restaurants, environmental organisations and community groups which has enabled us to recruit 26 co-sponsors. For example, youth leaders speaking at the Council Member press conference introducing the bill, testified before the City Council and organised a March for the Ocean to demonstrate public support. This bill is slated to be passed by the end of 2019.

WCS Operations: As a part of a public commitment we made with other US Aquariums, all five WCS parks eliminated single-use plastic straws, cold drink lids and plastic bags.

Photo: South Carolina Aquarium team cleaning up and using a citizen science app they have developed.
© South Carolina Aquarium



Adelaide Zoo (Australia)

Zoos South Australia - Adelaide Zoo's Animal Health Department has recently radically changed its approach to recycling and single-use plastics. What started with us disposing of and recycling according to different coloured bins eventually led us to contacting suppliers for advice on how best to recycle and reuse medical equipment.

By consulting our suppliers, we helped them to consider their own waste management, creating a trickle-on effect as they took these considerations to their other customers and supply chains. We are proud to say we are leading in this space within our organisation by creating sustainable practices when it comes to instruments like syringes, including their packaging, drip bags, paper towels and medical waste. And this is just the beginning! Not only have we managed to reduce the footprint of the Animal Health Department, but challenged our staff to consider their personal impacts and work together to come up with a solution.



Photo: Jenny McLelland, Veterinarian from Adelaide Zoo, disposing of drip bags into a specialised PVC recycling bin. © Adelaide Zoo



Photo: A family enjoys snacks using sustainable ware at Tierpark Nordhorn's Christmas market. © Wilfred Jürges

Tierpark Nordhorn (Germany)

At Tierpark Nordhorn we try to avoid single-use material where we can – we use porcelain dishes and cups and metal cutlery. Nonetheless, some visitors want a coffee to go and for some snack points multiple-use material is not feasible. But all single-use material that we cannot avoid in our facility is made from sustainable, natural raw material which is biodegradable and compostable: natural starch derived from plants like corn and sugarcane and sugarcane bagasse pulp, which is a leftover in the sugar industry. These can be used as the raw materials for new single-use packaging materials. Such products do not increase the worldwide piles of plastic rubbish.

Additionally, visitors do not always sort waste, even if waste bins for different kinds of rubbish are offered. Because of this, all of our waste is separated manually by two of our employees, who bring back the sorted waste to the resource cycle.

Columbus Zoo and Aquarium (United States of America)

In 2017 staff at the Columbus Zoo and Aquarium organised a *Plastic Free Challenge* for the month of July. Participants were given information, tips and motivation to reduce single-use plastic in their daily routines. In 2018 and 2019, the Columbus Zoo and Aquarium and Calgary Zoo joined forces to create the *Plastic Free EcoChallenge*, an online platform to raise awareness of the problems with single-use disposable plastic and to offer actions and alternatives for daily living.

In 2019, 48 aquariums and zoos joined the effort and invited their staff, volunteers, and, through social media and outreach, asked their communities to join the challenge. More than 15,000 people from 54 countries pledged to raise awareness and take steps to change their personal use of single-use plastics. Over 188,000 single actions were recorded in July, ranging from skipping the straw to engaging politicians and businesses on the issue.

Wildlife Reserves Singapore (Singapore)

At Wildlife Reserves Singapore (WRS) we are committed to eliminating all unrecyclable, single-use plastics from our operations by 2025. Since 2016, we have removed nearly 80% of single-use plastics from our parks, and we continue to work closely with our tenants and partners to support us on this journey. We have stopped selling drinking water in plastic bottles. Instead, we encourage our guests to use refillable bottles and take advantage of the water dispensers installed throughout our zoological parks. As an alternative, we offer water in eco-friendly packaging at our retail outlets.

We have removed single-use plastics, including straws and cutlery, from our restaurants. When single-use service ware is needed, we use biodegradable materials. Our retail shops have replaced plastic bags with non-woven bags, which are sold with all proceeds going to our conservation fund. With respect to advocacy, we educate our guests on the threat posed by single-use plastics and encourage everyone to stop using unsustainable single use products in their daily lives.

Our initiatives have amounted to the reduction of over 16 tonnes of plastic waste each year.

Photo: In 2016, WRS started installing water dispensers across its four parks. The dispensers are accompanied by messages that encourage the use of refillable bottles over single-use plastic bottles.
© Wildlife Reserves Singapore



Two Oceans Aquarium (South Africa)

In 2011, the Rethink the Bag campaign was launched as an official environmental campaign of the Two Oceans Aquarium in Cape Town. In 2016, the Aquarium staff agreed to not bring plastic shopping bags into the working environment.

While Rethink the Bag remains the flagship environmental campaign, five others were created to support the 'awareness to action' focus. These campaigns include *Balloon Busters*, *Straws Suck*, *Tap In*, *Bin your Butts*, and *Cut a Loop*. The Aquarium's mission is to 'inspire action for the future well-being of our oceans' by empowering individuals to be accountable for their choices. In the plastic pollution context, the intention is a society less dependent on single-use plastic 'convenience' and, thus, achieving the organisation's vision of abundant and healthy oceans for life.

The Two Oceans Aquarium includes messaging around single-use plastic and plastic pollution in the ocean in its exhibits, in feed talk presentations, outreach programmes, in blogs and social media, and in educational programmes and publications. They also hold beach clean-ups and gather scientific data on the items found on the beach.

In 2017, a local book brand removed plastic shopping bags from all 70 of their stores nationwide, replacing them with locally made, reusable fabric bags. Today two national retailers show their support with **#rethinkthebag** printed on their alternative shopping bags. The Victoria & Alfred (V&A) Waterfront in Cape Town, where the Two Oceans Aquarium is situated, has committed to ensuring no straws of any type will be available on the property as of July 2019.



Scan the QR Code above to watch Two Oceans Aquarium's environmental campaign video.



SAAMBR - uShaka Sea World (South Africa)

The South African Association for Marine Biological Research (SAAMBR), the NGO responsible for uShaka Sea World, is committed to helping people care for the ocean. Their challenge was how to encourage thousands of visitors to make environmentally responsible decisions at home. To address this challenge, they designed a behaviour change campaign that would encourage visitors to undertake environmentally responsible behaviours at home.

Visitors to uShaka Sea World were encouraged to 'Make a Promise to the Penguins'. A promise is a commitment by visitors to make one change in their daily lives to become more environmentally responsible. Visitors hand-wrote their promise on a postcard and posted it onsite. The tag line '*We don't want your money honey, we want your love*', proved to be very popular. Research provided evidence of the efficacy of the campaign.

Visitors who completed a postcard were contacted a year or more after their visit and asked about the outcomes of their promise. The results (N=316) showed that 49.4% of respondents could give an example of something positive they had done for the environment, that they attributed to the campaign.



Photo: An uShaka Sea World visitor makes a Promise to the Penguin. © uShaka Sea World

Loro Parque (Spain)

In April 2018, Loro Parque announced that it would implement a strategy for the removal of single-use plastics from use at its facilities. It has been a process and the Park is still working on a few improvements, but since the beginning of 2018 and thanks to these efforts, the use of over 30 tonnes of this harmful material has been avoided; and in 2020, more than 90% of single-use plastic will have been removed.

On the following page you will find some examples of the more and less common single-use products that have been replaced and the sustainable options used instead.

- **Raincoat** (22.621 kg/year)
 - **Garden bin bags** (1.575 kg/year)
 - **Sauce sachets** (495 kg/year)
 - **Single-dose butter** (195 kg/year)
 - **Single-dose oil and vinegar** (132 kg/year)
 - **Sparkling water bottle** (756 kg/year)
 - **Water bottle** (5.134 kg/year)
 - **Plastic cutlery** (787 kg/year)
 - **Plastic cups** (1470 kg/year)
 - **White supermarket bag** (720 kg/year)
 - **Transparent plastic bags** (75 kg/year)
 - **Plastic leads** (67 kg/year)
 - **Straws** (60 kg/year)
- **Sustainable raincoat**
 - **Fabric bin bags**
 - **Glass bottle**
 - **Paper packaging**
 - **Glass bottle**
 - **Glass bottle**
 - **Bio bottle (PLA+PET)**
 - **PLA**
 - **PLA cups**
 - **Paper bag**
 - **Eliminated**
 - **Eliminated**
 - **PLA (soon changed to paper)**

Additionally, the Park has continued to raise awareness among the public about the existing problems and about what each person can do to help with the situation. Thus, the Loro Parque Foundation has recently displayed a few sculptures made from recycled objects that demonstrate the serious problem that plastic causes to the environment.

Photo: Art-inspired sculpture made from plastics recovered from the beach. © Loro Parque





Photo: Post-mix refill station at Zoos Victoria
© Zoos Victoria

Zoos Victoria (Australia)

As the first carbon neutral zoo in the world, we are committed to reducing single-use plastic as part of our zero-waste programme.

So far, we have achieved the following:

- Established a Single-use Plastics Policy in December 2018.
- Eliminated 600,000 units of plastic bottles per year (equating to 12 tonnes of plastic waste), by switching to post-mix and refillable alternatives at zoo food outlets.
- Banned straws, plastics bags and non-essential single-use plastics.
- Provided more drinking fountains.
- Introduced compostable takeaway food packaging, plates, cups and cutlery that are collected via our organics bins and processed on-site via our in-vessel composter.
- Established a circular economy for single-use plastics. We buy back recycled plastic products such as outdoor furniture, decking and sleepers.
- Established a new zero-landfill three-bin system (organics, soft plastics, and comingled).
- Established campaigns and education programmes such as:

www.zoo.org.au/balloons

www.zoo.org.au/education/fe-schools

www.zoo.org.au/melbourne/whats-on/events/planet-or-plastic

Copenhagen Zoo (Denmark)

Copenhagen Zoo has been working on phasing out single-use plastics for a couple of years. The goal is to phase out all single-use plastics within the visitor area by the end of 2020. To reach the goal, a working group including representatives from the animal department, sales and marketing, research and conservation and the environmental department, was set up in September 2018. It has set goals and deadlines for the phase-out and holds regular follow-up meetings.

To date the following projects have been completed:

Within the Zoo's visitor areas:

- Contracts with external contractors, demand that no single-use plastics should be used.
- Plastic cutlery has been replaced with wooden or bamboo cutlery.
- Plastic plates have been phased out.
- Single-use plastic straws are being phased out.
- Cups with deposit have been introduced in the Zoo's kiosks. The aim is to expand this to the external stall contractors as well.
- External stall contractors sell beverages in bottles with deposit or served in glassware.
- Plastic bags are no longer provided in the shops and visitors can purchase an eco-friendly bag.

Within the Zoo's operational areas:

- For all meetings, plastic water bottles have been replaced with water served in jugs.
- Disposable dishcloths have been replaced with an alternative without micro plastics. Cotton cloths are being tested as they can be washed and reused.
- The goal for the animal department is to replace, where there is no risk of infection, single-use gloves with reusable gloves, as they last for several months.
- An alternative to single-use shoe-covers will also be tested.

For more case studies, please visit:
bit.ly/Plasticscasestudies

Already reducing - what more can your zoo or aquarium do?

What if you already have a single-use plastic policy and NO single-use plastic on your premises?

- Do you have proof of how much plastic you have 'saved'?
- Have you documented your route to reduction to provide others with ideas and encouragement?
- How did you overcome the barriers we discussed earlier? Perhaps you could share your solutions with the rest of the WAZA community.
- Do you have a campaign to encourage your visitors to stop using single-use plastics?
- Have you been able to influence local or national legislation? If yes – how have you achieved this and what has the impact been?
- Have you been successful with suppliers? If yes – which suppliers did you work with and what motivated them to change? What did you do that made the change?

Photo: Straws picked up during a beach clean-up. © Two Oceans Aquarium



Additional resources

The following is a selection of global plastic free campaigns:

The Seductive Power of Single-Use Plastic. The European Commission's #ReadyToChange plastics campaign. *(Available in 23 languages)*

bereadytochange.eu

First step: Your last straw is the first step – A campaign from the Aquarium Conservation Partnership *(English)*

ourhands.org

Other links

plasticfreechallenge.org

plasticfreepledge.com

plasticfreeme.org/campaigns

breakfreefromplastic.org/get-involved

earthday.org/plasticban

plasticfreejuly.org

aplasticplanet.com

plasticoupfoundation.org

strawlessocean.org

skyoceanrescue.com





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