reset your habits

BEST PRACTICES GUIDE FOR PLASTIC-BOTTLE-FREE CITIES

We can't solve problems by using the same kind of thinking we used when we created them.

Albert Einstein

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The age of plastic

5.25 trillion: is the estimated total of plastic debris floating on the Ocean's surface[1]. This astronomical amount is fuelled by 8 million tonnes of plastic waste which is dumped every year[2] to such an extent that the already-existing quantity in the Ocean could triple by 2025[3]. The consequences of this pollution on marine fauna and flora are already visible. Although long-term impacts are still unclear[4], they are cause for increasing concern as we reckon that, by 2050, 99% of marine birds will have swallowed plastic at least once in their life[5].

This scourge, which alarms through its presence in ocean trenches and in Arctic glaciers, is likely to persist for an indefinite term. Once in the Ocean, these fragments of plastic do not disappear but break up into microparticles of plastic (smaller than 5 mm), omnipresent in our everyday life[6] (in water, beer, salt and even honey), and raising serious questions with regard to their impact on human health.

This "age of plastic" is predominantly attributable to our production and consumption patterns, which are evermore raw material, single-use/disposable plastic and packaging intensive... Global annual plastic production rocketed from 1.5 million tonnes in 1950 to 322 million tonnes in 2015[7]. Overall, humankind has produced over 8.3 billion tonnes of plastic, of which hardly even 9% has been recycled, 12% incinerated and 79% buried in landfill or discarded in the environment[8] before eventually ending up in the Ocean.

[1] Eriksen et al. 2010.
[2] Jambeck et al. 2015.
[3] UK Government Office for Science. «Future of the sea: final report«, 21 March 2018..
[4] Rochman, Chelsea M. et al. 2018..
[5] UK Government Office for Science. «Future of the sea: final report«, 21 March 2018..
[6] Catarino, Ana I et al. 2018.
[7] PlasticsEurope. «Plastics – the Facts 2017«, 2017. «World Plastics Production 1950 – 2015«, 2016.
[8] Geyer et al. 2017.

Surfrider Foundation Europe and the fight against aquatic waste

Founded in 1990 by a handful of local surfers, Surfrider Foundation Europe has been working for almost 30 years to preserve oceans, coastlines and aquatic environments from the negative effects of climate change, aquatic waste and marine pollution caused by the dumping of toxic substances.

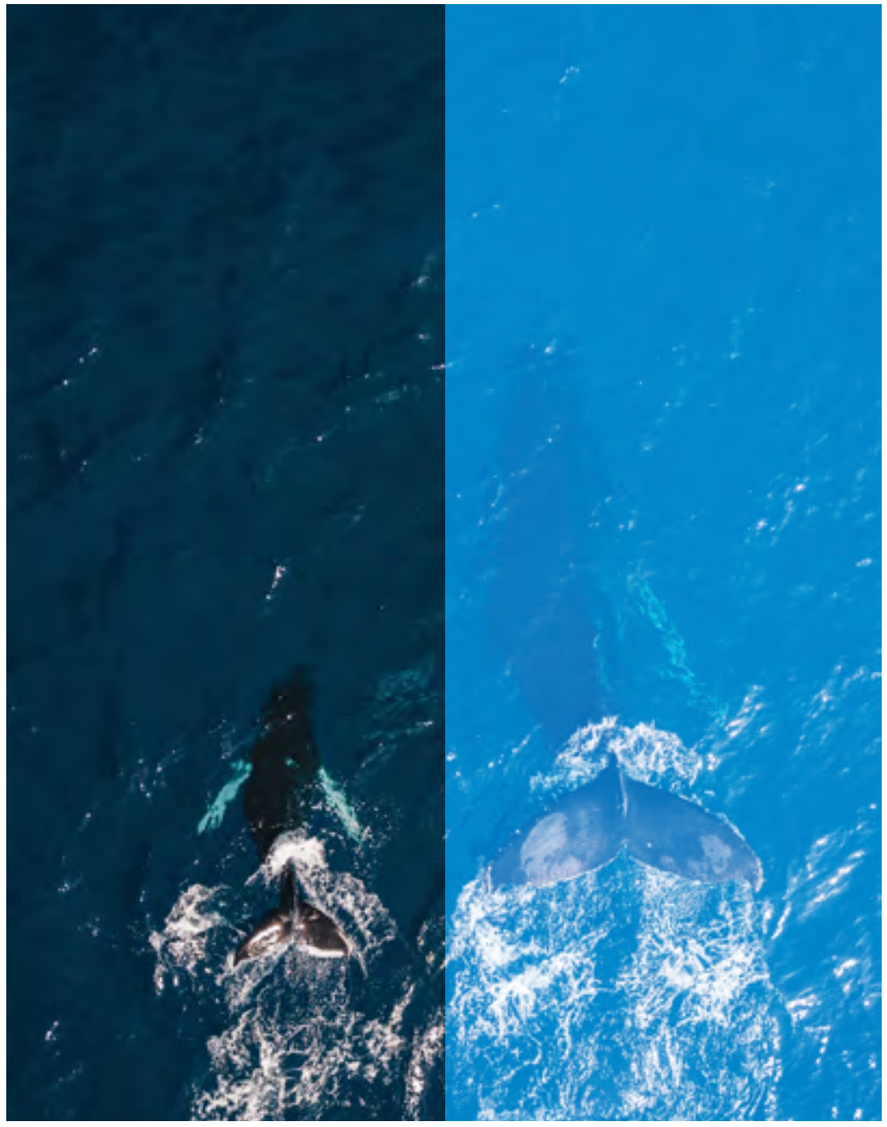
60 to 90% of aquatic waste is made of plastic[9]: as such, it is vital to reduce this pollution at the source. To this end, through its actions, Surfrider Foundation Europe endeavours to inform, raise awareness and educate citizens about aquatic waste-related pollution, in particular through data collected during its various scientific programmes for qualifying and quantifying this waste found in the ocean, rivers and along the coastline.

The organization is also committed to transmitting eco-friendly gesture and to promoting alternative solutions to reduce the ecological footprint as well as to calling for the legislative and political framework to be tailored to take into account the protection and preservation needs of the marine and coastline environment.

Reset Your Habits: reusable bottles can make the difference

52 billion plastic water bottles are consumed on average every year in Europe and take over 1,000 years to degrade in the environment versus a usage time which rarely exceeds 24 hours. Among the Top 10 waste items found on beaches during Ocean Initiatives[10], plastic bottles and their caps, which perfectly illustrate our "Plastic" society.

Consequently, in 2017 Surfrider Foundation Europe launched its **Reset Your Habits: reusable bottles can make the difference**. Targeting citizens, public institutions and businesses, the aim of this campaign is to reduce pollution caused by plastic bottles, in particular water bottles, throughout their lifecycle by initiating different drivers[11]: reducing production, distribution and consumption of plastic bottles as well as optimizing their eco-design and their end-of-life.



Why plastic-bottle-free cities?

80% of all aquatic waste comes from land-based sources. Carried along by the wind and run-offs, it ends up in rivers and watersheds and is then incorporated in the flow and ultimately finishes its route in the Ocean. Cities, where population concentration is the densest, generate great quantities of this waste. So, it is vital to take action at city-level to reduce accidental and deliberate dis charge of plastic bottles into the environment.

Cities exemplify the "act local" as regards ecological transition and, as such, are key players in fighting this pollution. Therefore, they can take action at several levels and, would be well advised to do so. By reducing packaging at source and by developing alternatives, based in particular on access to drinking water for everyone which ensures their citizens' good health and respects their rights.

By informing, by raising awareness and by mobilizing citizens to support them through ecological transition. But also by modifying the regulatory framework to stimulate a more effective change in behavioural patterns at local level. Cities are key drivers of change and their participation in reducing plastic pollution is vital.

Best practices guide aims and who it is aimed at

This guide is intended, first and foremost, for public authorities - cities, towns, municipalities, local authorities as well as States - because they are key in implementing national and European policies throughout their regions and in tailoring them to their citizens' needs. Through this initiative they must set the example for their inhabitants. This guide is also intended for private stakeholders and citizens who benefit from and promote these best practices.

The aim of this guide, which encourages best practices to be implemented, is to reduce the quantity of plastic bottle-related waste generated in cities so as to counter its production upstream and, as such, to prevent its discharge into the environment. By presenting a selection of effective yet non-exhaustive best practices, Surfrider Foundation Europe highlights the potential for reducing the use of plastic bottles and its resulting pollution. This guide, which pinpoints 20 measures, should be read like a catalogue of initiatives to be implemented throughout regions whilst focusing on 5 key lines of approach:

1. Reduce at source
2. Promote alternatives
3. Improve design
4. Improve end-of-life
5. Inform citizens and raise awareness

[9] Galgani et al. 2015.

[10] See Surfrider Foundation Europe's Ocean Initiatives programme: www.oceaninitiatives.org/

[11] White paper for a plastic-bottle-free ocean: www.surfrider.eu/doc/whitepaper_bottle_2017.pdf

5 key lines

1. Reduce at source: limit production and distribution

The best waste is the one we never produce.
Limiting pollution caused by plastic bottles means first and foremost limiting their provision. This means reducing the environmental impact generated by bottle production and by the bottle itself whenever it becomes waste.
Plastic bottle production, just like their transport or their recycling, emits high levels of greenhouse gas and is fossil energy, oil and water intensive.
To preserve these natural resources, to reduce the carbon footprint and to prevent waste generation, plastic bottle production and distribution needs to be reduced.

2. Promote alternatives: limit consumption

Fill your reusable bottle, not the Ocean. Plastic bottles, available everywhere, in every size, are extensively consumed by citizens the world over who are generally unaware of the negative impact this packaging has on the environment.
To reduce this pollution, citizens need to be informed and made aware of the eco-friendly, green alternatives which exist so they may continue to consume water and other beverages whilst reducing the ecological footprint. Solutions which are both eco-friendly and economically-friendly as 90% of the price of bottled water corresponds to its packaging, and tap water is 100 to 300 times cheaper than bottled water.

3. Improve design: promote eco-design

Refuse disposable, choose sustainable.
By rethinking product lifecycles, eco-design plays a key role in limiting the environmental impact of plastic bottles on the natural environment.
Whenever plastic bottles are not sorted in waste collection, whenever they are treated but not recycled and even when they are recycled, they leave a strong adverse ecological footprint on the environment. Eco-design, or modifying current design, is a way of taking action at these three levels. Within a circular economy approach, eco-design integrates the idea of end-of-life from the moment an object is designed.
As such, plastic bottle reuse, using differently and recycling are facilitated, economic and energy costs are reduced and this «waste« is transformed into raw material or by-products.

4. Improve end-of-life: optimize collection and recycling

“Nothing is lost, nothing is created, everything is transformed”.
In addition to reduction and reuse initiatives, the disposal of bottles as waste needs to be improved on to ensure they are all collected and recycled.
Recycling is not a solution in itself, as it is likely to increase upstream production which requires the use of fossil energy, and given its high energy consumption.
Nevertheless, recycling provides a part-answer to the issue of bottles in the environment by giving them economic value: the plastic bottle is no longer considered as “waste” but as “secondary raw material”.

5. Inform citizens and raise awarenesss

“Well informed, people are citizens”.
Ecological transition cannot happen without everyone being involved. It is vital to inform, raise awareness and mobilize as many people as possible to ensure they understand and become involved in this transition. This makes it easier to move forward from a society of mass consumerism to one which is eco-responsible, eco-friendly and fully aware of its environmental limits. To accompany, legitimize and ensure the effectiveness of change, citizens need to be made aware of the challenges, the issues and must become proactive players in this transition.

Municipalities, which have frontline contact with citizens, can become fully involved in this awareness-raising by informing citizens about the reasons and the solutions which justify and support this change.

Methodology

Although these five lines of approach are implemented independently, they are however complementary in fighting plastic pollution globally.

To produce this guide, Surfrider Foundation Europe used several sources:

- Interviews with several stakeholders (public authority officers, citizens, Surfrider volunteers)
- Participation in Green Week 2018 whose theme was “Green cities for a greener future”
- The compilation of a dense, varied bibliography (scientific articles, press articles, legal documents, etc.)

20 initiatives were selected from this research and illustrate different examples to follow or exemplify sources of inspiration for reducing plastic bottle-related pollution.

01

Reduce at source: limit production and distribution

Why?

The best waste is the one we never produce.

Limiting pollution caused by plastic bottles means first and foremost limiting their provision. This means reducing the environmental impact generated by bottle production and by the bottle itself whenever it becomes waste.

Plastic bottle production, just like their transport or their recycling, emits high levels of greenhouse gas and is fossil energy, oil and water intensive. To preserve these natural resources, to reduce the carbon footprint and to prevent waste generation, plastic bottle production and distribution needs to be reduced.

These bottles, which are extensively used during conferences, meetings, events, etc. and provided by hotels and restaurants, are an outright source of pollution. Small volumes in particular (20 cl, 25 cl and 33 cl) where usage time is incredibly disproportionate to their longevity. As such, plastic bottles need to be replaced by the myriad of already-existing eco-friendly alternatives.

How can public authorities become involved in this?

Based on their legislative and/or regulatory powers, public authorities can take action at various levels to establish a framework for plastic bottle provision and to encourage reduction: by legislating, regulating inside public institutions and by urging citizens to stop using plastic bottles.

Legislate to reduce plastic bottle use in cities

Where public authorities have the powers to do so, they can legislate more or less stringently to limit the quantity of bottles produced and/or distributed in their region: ban their sale, their production, their transport and their use, or limit it in specific points-of-sale.

01

MAHARASHTRA STATE (CAPITAL BOMBAY) ENDEAVOUR TO IMPOSE A MORATORIUM ON PLASTIC BOTTLES

COUNTRY
India
Maharashtra State Government

TYPE OF MEASURE
Total moratorium on plastic bottles containing less than 50 cl.

MEANS USED
Legislation (change in legislation through the *Maharashtra Plastic and Thermocol Products [Manufacture, Usage, Sale, Transport, Handling and Storage] Notification, 2018*.)

PARTIES CONCERNED
Manufacturers, distributors, sellers, traders and consumers

STATUS
Implemented then replaced by a deposit-return system (March-April 2018)

On 23 May 2018, the Maharashtra State Government in India (120 million inhabitants) published the Maharashtra Plastic and Thermocol Products (Manufacture, Usage, Sale, Transport, Handling and Storage) Notification imposing a total moratorium on single-use plastic. This decision is substantiated by the policy to wipe out illegal plastic industries and the pollution they generate. According to the Ministry for the Environment, some 120 illegal plastic bottle producers exist in and around Mumbai. As such, production, transport, distribution, wholesale and retail as well as consumption of PET plastic bottles containing less than 50 cl is banned. Non-compliance with this measure would be punishable by a 5,000 rupees fine (60 euros) for first-time offenders, 10,000 rupees (120 euros) for second-time offenders and 25,000 rupees (310 euros) with risk of three months' imprisonment for third-time offenders. Producers face losing their licence. Parties concerned are given one month to recycle or dispose of their stock.

In response to the plastic bottle producers' association, the moratorium on plastic bottles containing less than 50 cl was cancelled on 12 April 2018 and replaced with a deposit-return system. The industry concerned is responsible for rolling out a deposit-return system for all sizes of PET plastic bottles throughout the state. A system which implements a tiered deposit-return based on bottle content: 1 rupee for volumes over one litre and 2 rupees for smaller bottles.

Find out more
Notice published by the Maharashtra State Government: *Maharashtra Plastic and Thermocol Products (Manufacture, Usage, Sale, Transport, Handling and Storage) Notification, 2018* http://mpcb.gov.in/images/pdf/plastic_27032018.pdf

02

CITY OF CONCORD BAN ON THE SALE OF PLASTIC BOTTLES

COUNTRY
New Hampshire - USA.

TYPE OF MEASURE
Ban on the sale of plastic bottles containing less than one litre of still water inside the city.

MEANS USED
Regulation (municipal by-law on bottles of water).

PARTIES CONCERNED
Traders, catering, hotel industry and other sectors likely to sell bottles of water.

STATUS
Finalized (1st January 2013).

Following strong activism from its inhabitants, the city of Concord passed a municipal by-law making it illegal, in the city, to sell unflavoured still water in single-use PET plastic bottles, containing a litre or less. After having submitted this proposal to a vote several times, the city's municipal council voted, on 25 April 2012, to ban these bottles totally. This measure, in effect since 1st January 2013, includes financial sanctions in the event of infringement. First-time offenders are issued a warning, second-time offenders a $25 fine and third-time offenders a $50 fine.

The distribution of plastic water bottles during sports events, festivals and outdoor gatherings is also banned. Notwithstanding, in situations of extreme emergency when drinking water quality or provision is compromised, the moratorium on sales may be waived for a set period.

Find out more
Concord city site, *FAQ concerning the municipal by-law*
http://concordma.gov/DocumentCenter/View/4022/Frequently-Asked-Questions-FAQs-PDF

03

HONG KONG GOVERNMENT TOTAL BAN ON PLASTIC BOTTLES IN VENDING MACHINES

On 24 November 2017, the Hong Kong Government voted a moratorium banning the sale of plastic bottles containing less than one litre of still water in vending machines in public places. This moratorium, in effect since 20 February 2018, concerns 1,131 vending machines located in:

- libraries, museums, event venues, sports centres, parks, swimming pools and beaches
- public markets
- community halls
- government premises
- ports
- public transport stations
- clinics and hospitals

The measure intends to reduce the number of plastic bottles consumed on a daily basis in Hong Kong (5.2 million), of which the majority is buried in landfill instead of recycled.

Find out more

Hong Kong Government site:
http://www.info.gov.hk/gia/general/201612/14/P2016121400425.htm

COUNTRY
Hong Kong

TYPE OF MEASURE
Ban on the sale of plastic bottles containing less than one litre of water in public places.

MEANS USED
Legislation (policy implemented by the government).

PARTIES CONCERNED
Bottled water vending machines.

STATUS
Finalized (20 February 2018).

Implement regulations to ban plastic bottles in specific places: institutions, universities, events

Public authorities and establishments, like administrations and universities, can modify their rules of procedure and public procurement to reduce the use of plastic bottles in their everyday running and/or in events which they organize. As such, they will be setting the example and encouraging citizens to act in the same way.

04

CITY OF HAMBURG A PLASTIC-BOTTLE-FREE ADMINISTRATION

COUNTRY
Germany.

PARTIES CONCERNED
City of Hamburg public institutions and agencies.

TYPE OF MEASURE
Implementation of a sustainable public procurement guide banning the purchase of plastic bottles.

STATUS
Finalized (19 January 2016).

MEANS USED
Regulation (rules of procedure modified).

On 19 January 2016, the city of Hamburg Senate adopted "Green Procurement Guidelines" as such making its application compulsory throughout the city of Hamburg area. These guidelines introduced two obligations for the parties concerned: a more eco-friendly procurement choice and a ban on the public procurement purchasing of a certain number of objects which comprise plastic bottles.
The city which wishes to be a pure player as regards ecological responsibility chose to ban single-use bottles - including deposits-returns - from its public procurement. Thus, in all public buildings, green alternatives are provided such as drinking-water fountains and jugs.

This ban on purchasing plastic bottles is warranted for both environmental and economic reasons. Purchasing longer-lifetime, reusable products is less expensive than the recurrent purchase of limited-lifecycle products.

Find out more

City of Hamburg site, *Green Procurement Guidelines.*
http://www.hamburg.de/contentblob/6789344/b75ca35ac5a3431b375ac5f4cd3e531d/data/d-umweltleitfaden-kurz-englisch.pdf

05

THE UNIVERSITÉ DU QUÉBEC À TROIS-RIVIÈRES (UQTR) FOR A BOTTLED-WATER-FREE CAMPUS

COUNTRY
Québec (Canada).

PARTIES CONCERNED
University students and staff.

TYPE OF MEASURE
End of plastic bottle distribution on the campus.

STATUS
Ongoing (2018-2019).

MEANS USED
Regulation (resolution adopted by the Board of Directors).

During World Water Day on 22 March 2018, the Université du Québec à Trois-Rivières took the decision to stop using plastic water bottles on the campus. Following a resolution adopted on 12 March 2018, bottled water is currently being gradually phased out of the campus, as such putting an end to the consumption of some 20,000 bottles a year. Although this figure was already on the decrease over the last few years, down from 34,000 in 2013, the measure adopted should reduce it to zero.

The university had already taken the initiative to encourage its staff to avoid consuming plastic water bottles by offering all staff reusable stainless steel bottles in 2016. This measure is now boosted by the removal of plastic water bottles from vending machines as of September 2018 and from cafés, restaurants and specific events as of January 2019.

Simultaneously, the university installed a network of high-quality drinking-water fountains. An eco-friendly, economically-friendly initiative.

Find out more

UQTR blog, *presentation of the campaign for eliminating plastic bottles*
https://blogue.uqtr.ca/2018/03/22/vers-un-campus-sans-eau-embouteillee/

06

CITY OF SAN FRANCISCO BAN ON THE SALE OF PLASTIC BOTTLES DURING EVENTS

COUNTRY
USA.

TYPE OF MEASURE
Ban on the sale of plastic water bottles during events held in the municipal district.

MEANS USED
Regulation (municipal ordinance).

PARTIES CONCERNED
Event organizers.

STATUS
Finalized (2014-2018).

For over 10 years now, the city of San Francisco has been implementing a real policy for eliminating plastic water bottles from the city of San Francisco. In 2007, the Municipal Council started by banning procurement of plastic water bottles with public money. This was followed by other measures related to eco-design (use of recycled plastic and non-removable bottle caps) and the introduction of drinking-water fountains throughout the administration.

The ordinance concerning bottled water and packaging-free, enacted in 2014 by the Mayor, restricts the sale of plastic bottles containing less than 21 ounces of water (around 0.6 litres) in public places. This ordinance bans in particular the sale and distribution of these bottles during events organized throughout the municipal district. Although this ordinance intends, above all, to reduce the consumption of plastic bottles, on a more general level it also concerns packaged water, regardless if it is in a plastic bottle, a can, a closed bag or any other single-use container.

To ensure event organizers had time to adapt and the city had time to implement a real drinking water network, the scope of the ban was progressively extended over a 4-year period. As such, in 2016, the ban related to any event held in the streets, then in 2018 to any event organized by not-for-profit organizations and welcoming more than 250,000 people.

Find out more
City of San Francisco Department of the Environment site,
Page on legislation governing waste https://sfenvironment.org/zero-waste-legislation

Making public procurement greener with the EU's help

To help public authorities make their public procurement more eco-friendly, the European Commission has published a range of guides on the topic:
- Public Procurement for a Circular Economy (2017)
- Buying Green! A handbook on green tenders, 3rd edition (2016)
- GPP at a glance. Collection of Good Practices on GPP (2012)

These publications are available on:
http://ec.europa.eu/environment/gpp/pubs_en.htm

Promote voluntary reduction of plastic bottle distribution and consumption

Through public authority, association and/or citizen initiative, an action plan can be implemented in the city to promote the reduction of plastic bottle production, distribution and sale. Public authorities play a key role in implementing these incentives which promote mobilization rather than legislative restriction. The aim is to encourage the various parties targeted - citizens, businesses etc., to take voluntary action to put an end to the distribution, sale and consumption of these bottles.

07

BUNDANOON
BUNDY ON TAP, TAP WATER INITIATIVE

COUNTRY
Australia.

TYPE OF MEASURE
Ending the distribution, sale and consumption of plastic still-water bottles.

MEANS USED
Engaging dialogue between parties (general agreement between the different stakeholders).

PARTIES CONCERNED
All parties present in the town.

STATUS
Finalized (2009).

Back in 2009, the town of Bundanoon in the NSW Southern Highlands of Australia decided to become Australia's first bottled-water-free town. Through the initiative of a Bundanoon resident, Huw Kingston, the project to make his town Australia's first plastic-bottle-free town was largely justified by the town's citizens' opposing the activity of the water extraction company, Norlex, located outside the town. Disputing Norlex's exploitation of a drinking water source located in the town, many citizens and shopkeepers decided to voluntarily refrain from consuming bottled water, at the expense of the economic impact it would have on certain businesses. In July 2009, following a municipal vote, the town decided to support the initiative.

As such, by cooperating together and without implementing any statutory ban, the different parties of Bundanoon gradually phased out the distribution, sale and consumption of plastic water bottles:

- Traders stopped selling bottled water which they replaced with reusable gourds
- The Town Hall ensured the water distribution system was effective and, at the same time, rolled out a water fountain or 'bubbler' system

Thus, on september 26th, following the voluntary action of the town's citizens, the Town Hall and the traders, Bundanoon became “Australia's first bottled-water-free town”.

Find out more
The initiative site *Bundy on Tap*
http://www.bundyontap.com.au/

08

ROUBAIX
DÉMARCHE ZÉRO DÉCHET ROUBAIX (ZERO-WASTE ACTION) GEARED TO BUSINESSES

In 2015, the town of Roubaix decided to implement the Zero-Waste Action, an initiative designed to reduce the amount of waste produced by the town every year, which averaged at around 243 kilograms per inhabitant.

Roubaix's action is totally voluntary and each individual may participate freely. The key driver used is a voluntary Zero-Waste Action charter intended for all town players: citizens, associations, traders and businesses.

Roubaix's initiative encourages businesses, which are frequently left out of waste action plans, to "integrate a circular economy approach (refuse disposable, choose repairable, etc.) into their procurement, their manufacturing and their packaging processes". Although this measure does not target plastic bottles in a clear-cut way, these bottles are part and parcel of implementing sustainable procurement. As such, replacing plastic bottles with alternatives like drinking-water fountains and jugs is a real upstream waste reduction initiative.

Find out more
The Roubaix Zero-Waste action site
www.roubaixzerodechet.fr/

COUNTRY
France.

TYPE OF MEASURE
Overall aim to reduce business waste.

MEANS USED
Incentive (Voluntary Zero-Waste Action charter).

PARTIES CONCERNED
Businesses.

STATUS
Ongoing (2015-2018).

Biocoop, plastic bottle-free stores

On 1st January 2017, "Biocoop", the French organic chain of stores, decided to stop distributing and selling plastic water bottles in its points-of-sale. This decision was taken given the environmental impact of these bottles. The chain then introduced alternatives for its customers, proposing jugs and reusable bottles, as well as advice on consuming and filtering tap water.
www.biocoop.fr/actualites-bio/Biocoop-dit-non-a-l-eau-en-bouteille.

02

Promote alternatives: limit consumption

Why?

Fill your reusable bottle, not the Ocean.

Plastic bottles, available everywhere, in every size, are extensively consumed by citizens over the world who are generally unaware of the negative impact this packaging has on the environment. To reduce this pollution, citizens need to be informed and made aware of the eco-friendly, green alternatives which exist so they may continue to consume water and other beverages whilst reducing the ecological footprint. Solutions which are both eco-friendly and economically-friendly as 90% of the price of bottled water corresponds to its packaging, and tap water is 100 to 300 times cheaper than bottled water.

How can public authorities become involved in this?

To encourage consumers to change their habits to reduce waste and its impact on the environment, public authorities can provide access to high-quality drinking water everywhere, for everyone. Citizen-centric campaigns can be implemented to urge them to stop using disposable plastic bottles and, instead, to use water fountains.

Install water fountains and promote water access for everyone

Public authorities can develop water fountain networks throughout their areas so that citizens can fill their reusable bottles and other reusable containers instead of purchasing plastic bottles. They can also promote their use via awareness-raising campaigns which highlight their drinking water to reassure citizens of its quality, its cost and its safety. A complementary yet frequently necessary initiative to ensure the action is effective.

09

LONDON
REFILL LONDON

COUNTRY
England.

PARTIES CONCERNED
Public authorities, traders and citizens.

TYPE OF MEASURE
Rolling out a drinking water network to fight plastic pollution.

STATUS
Ongoing (2018-...).

MEANS USED
Territory Planning.

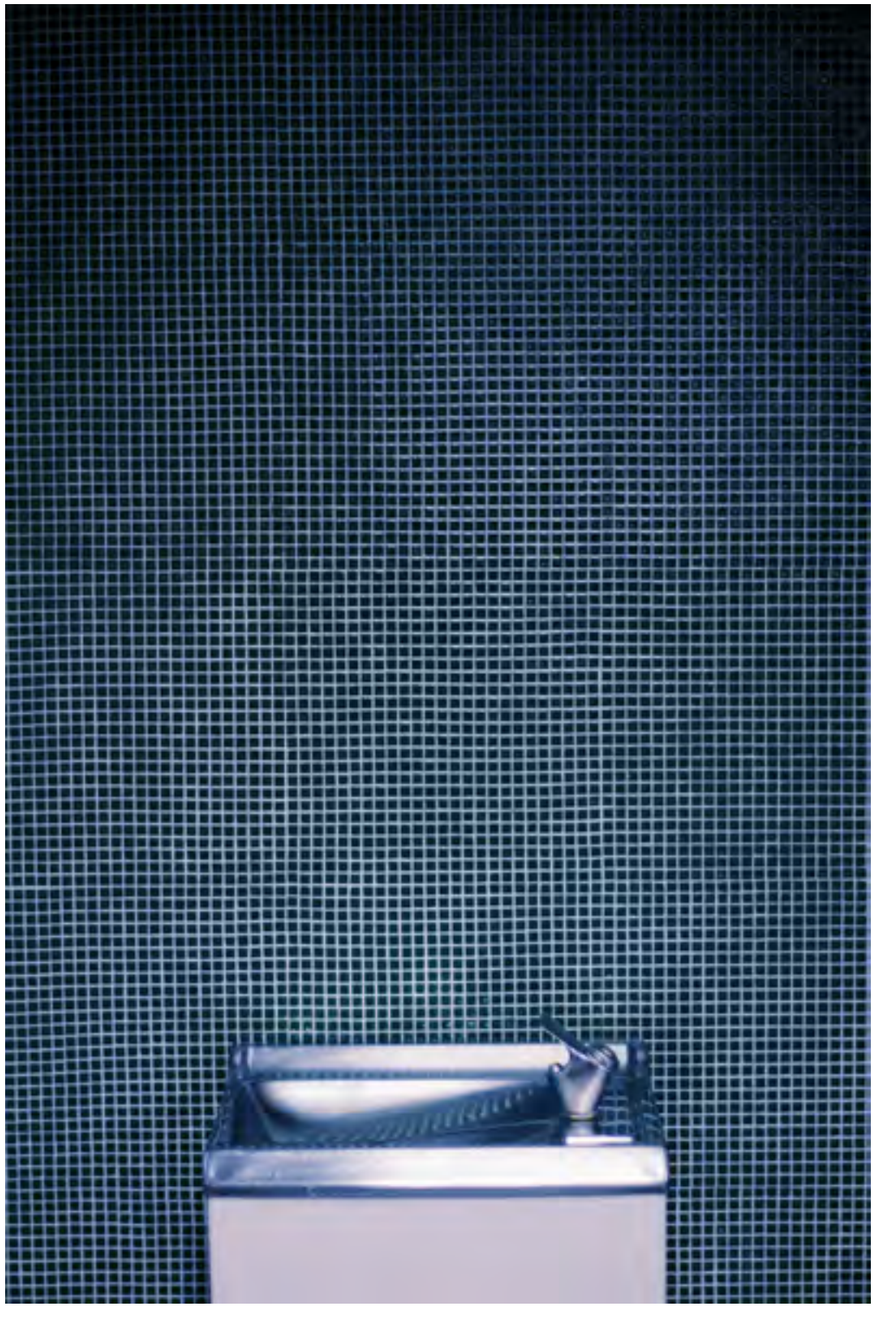
Averaging on 3 a week and 175 a year, Londoners consume a great quantity of plastic water bottles which more than likely end up in the environment. To fight this scourge, the Mayor of London, Sadiq Khan, has decided to develop a "long overdue" free drinking water network in the English capital.

Through the initiative of NGOs fighting plastic pollution, the campaign for promoting easy access to high-quality drinking water was backed on 15 March 2018 by the Mayor of London as well as by a host of store traders in the city, who decided to join in the scheme. The scheme intends to convince as many stores and businesses as possible to provide free access to drinking water on their premises. A sticker displayed on participating stores' windows shows passers-by that they can refill their reusable bottles there. The Refill app also offers a clear-view map of all reusable bottle refill stations. To date, over 5,700 refill stations have been created throughout the UK. This project, aimed at reducing the number of single-use plastic bottles consumed in the capital, is being developed initially on an experimental basis under the umbrella of the Zoological Society of London and rolled out by the City to Sea Association (and its Refill London campaign) as well as by the privately-owned public water supply and waste water treatment company Thames Water. Implemented in 5 London districts to start with, the results of this experimental phase are to be used to draw up a large-scale plan for rolling out more extensively.

In addition to developing this drinking water network, the Mayor of London also announced a 6-million pound environmental plan for the next 3 years which includes the development of a water fountain system throughout the capital. 16 public fountains are already planned by end 2018.

Find out more

London City site, *Refill London press release*
https://www.london.gov.uk/press-releases/mayoral/free-tap-water-scheme-launched-to-help-cut-waste



10

PARIS
PARIS, JE BOIRAI TOUJOURS DE TON EAU (PARIS, I'LL ALWAYS DRINK YOUR WATER)

COUNTRY
France.

PARTIES CONCERNED
Citizens.

TYPE OF MEASURE
Promoting City of Paris drinking water.

STATUS
Finalized (2017).

MEANS USED
Communication (promotional advertising campaign).

Hand-in-hand with Eau de Paris (public company in charge of producing and distributing water in Paris), the City of Paris initiated a promotional drinking water campaign in the city in 2017. Via a participative budget process, the City of Paris offered its inhabitants the opportunity to vote for the projects which they wished to see the city invest in. In 2015, its inhabitants chose to back a 2-million euro water fountain development project. By end 2018, some 40 water fountains will be installed including a dozen distributing sparkling water.
To inform citizens and encourage them to drink from fountains, the "Paris, je boirai toujours de ton eau" (Paris, I'll always drink your water) communication campaign was launched in summer 2017 to inform citizens of the quality and safety of city water. This was rolled out with posters and billboarding throughout the city as well as an information leaflet on drinking water. Paris presents its water as:

- Economically-friendly, available for everyone and cheaper than bottled water
- High-quality, health-friendly as it undergoes a large number of tests
- Eco-friendly as it is routed by an extremely energy-efficient aqueduct

In addition to this information, a visit to the Paris Pavillon de l'eau (museum devoted to water) is a must-do to discover all about Paris tap water quality, treatment and origin.

Find out more

Eau de Paris website, *Brochure de la campagne*
http://www.eaudeparis.fr/uploads/tx_edpevents/LIVRET_campagne2017.pdf

Promote packaging-free water consumption

At the same time as developing plastic bottle alternatives, it is necessary to raise consumers' awareness. By illustrating the need to reduce the carbon footprint and to preserve natural resources and by embracing waste reduction initiatives, public authorities can encourage the use of various alternatives. As such, various mobilization and awareness-raising projects have been and are being developed which illustrate citizens' and authorities' potential for reducing single-use bottle and plastic usage.

Promoting water and alternatives to plastic bottles through *Blue Communities Project*

By adhering to the Blue Communities Project, public authorities agree to:

1. recognize water and sanitation as human rights;
2. promote publicly financed, owned, and operated water and wastewater services;
3. ban or phase out the sale of bottled water in municipal facilities and at municipal events.

Initiated in Canada in 2009, many towns and cities have joined in since then, including Kingston (Ontario) in 2012, Paris in 2016 and Berlin in 2018.
https://canadians.org/bluecommunities

11

MÉTROPOLE EUROPÉENNE DE LILLE (MEL) THE «FAMILLES ZÉRO DÉCHET« (ZERO-WASTE FAMILIES) CHALLENGE

COUNTRY
France.

PARTIES CONCERNED
300 families from the Métropole Européenne de Lille (MEL).

TYPE OF MEASURE
Encourage families to reduce their waste production by 30% over a year.

STATUS
Ongoing (2017-...).

MEANS USED
Incentives, targets, support for parties concerned.

Drawing inspiration from other municipalities, on 17 November 2017, the Métropole Européenne de Lille (MEL) launched its first “Familles Zéro Déchet” (Zero-Waste Families) challenge. This initiative concerns some 300 voluntarily-participating families committed to reducing their domestic waste by 30% over the year. The challenge takes place as follows:

- November: Project launch
- December to May: Waste reduction and best practices sharing
- June: Project assessment

The Métropole Européenne de Lille (MEL) supports the families during their waste reduction challenge by providing them with bulk bags, a compost container and scales to weigh their waste. Lots of advice is also available on the project website. The Maison Régionale de l’Environnement et de la Solidarité (MRES - French Regional Association for the Environment and Solidarity) which leads the project also proposes informative workshops promoting composting, repairing and in particular green procurement such as purchasing reusable stainless steel bottles.

Find out more

“Famille Zéro Déchet” (Zero-Waste Families) challenge site, *Scoop it*
https://www.scoop.it/t/zero-dechet-info

12

GALWAY PLASTIC FREE WEEK

COUNTRY
Ireland.

TYPE OF MEASURE
Promoting a Plastic Free Week.

MEANS USED
Incentives, communication.

PARTIES CONCERNED
Citizens, Galway personalities.

STATUS
Finalized (February 2018).

On 5 February 2018, the City of Galway in Ireland launched a Plastic Free Week wishing to fight marine pollution by making citizens' aware of single-use plastic issues. The initiative, launched by the Mayor of Galway, Pearce Flannery, was supported by a host of personalities to encourage citizens to get involved. Rugby players from a local team as well as a Michelin-starred chef, for example, took part in the challenge. Everyone participating received a "zero-waste" kit comprising reusable alternatives, such as a reusable gourd, to help them complete the challenge. Many local schools got involved by disseminating the message and by implementing best practices with the help of an educational guide drawn up by the City Hall.

To make inhabitants' aware, personality ambassadors pledged to reduce their plastic consumption. The challenge was widely publicized over social media. Although it could not change national legislation totally, the City of Galway wished to broadcast a powerful message by showing and by adopting exemplary behaviour, illustrating that it is possible to put an end to the consumption of single-use plastic, in particular plastic bottles. Moreover, the city highlights the fact that all levels of society are concerned. The next phase is likely to be a change in the city's public procurement.

Find out more

Galway City site, *Plastic Free Week presentation*
https://www.galwaycity.ie/news/840/59/Could-YOU-live-without-Plastic-For-a-Week-High-Profile-Galweigans-rise-to-the-Challenge.-/d,News%20Detail

10 March aka international plastic-water-bottle-free day

International plastic-water-bottle-free day, launched in Canada, is aimed at mobilizing citizens to stop purchasing bottled water. Celebrated in March, first in Canada, then in the USA, this day centre stages water as a public service accessible to everyone versus the ecological impacts of single-use plastic.
https://canadians.org/blog/protecting-water-bottled-water-free-day

03

Improve design: promote eco-design

Why?

Refuse disposable, choose reusable.

By rethinking product lifecycles, eco-design plays a key role in limiting the environmental impact of plastic bottles on the natural environment.

Whenever plastic bottles are not sorted in waste collection, whenever they are treated but not recycled and even when they are recycled, they leave a strong adverse ecological footprint on the environment. Eco-design, or modifying current design, is a way of taking action at these three levels. Within a circular economy approach, eco-design integrates the idea of end-of-life from the moment an object is designed. As such, plastic bottle reuse, using differently and recycling are facilitated, economic and energy costs are reduced and this "waste" is transformed into raw material or by-products.

How can public authorities become involved in this?

Public authorities can promote the eco-design of bottles through regulatory and economic incentives. They can also exchange with industrial stakeholders to promote best practices and to make citizens aware of the issue and encourage them to consume eco-designed products.

Encourage eco-design through legislation

Modifying legislation is a means for controlling production and for ensuring more optimal eco-design as regards materials used, the design itself and recycling. If public authorities have the powers, they may modify production control legislation themselves throughout their areas or request that higher governing bodies do so.

13

STATE OF CALIFORNIA END OF REMOVABLE PLASTIC BOTTLE CAPS

COUNTRY
USA.

TYPE OF MEASURE
Change in legislation concerning removable plastic bottle caps.

MEANS USED
Législation.

PARTIES CONCERNED
Plastic bottle producers.

STATUS
Ongoing (2018).

The State of California is about to pass a law banning the production of plastic bottles with removable plastic caps.

Bill 2779 was introduced to the State of California Assembly by the elected Democrat Mark Stone. By 2022, it will ban the production of water packaged with a removable cap which is likely to get lost or disposed of in the environment. The Bill, however, includes an exception for small bottling plants which will not be required to comply with the law in a binding manner.

Plastic caps, along with plastic bottles, rank in the Top 10 waste items found on beaches. Due to their very small size, they are easily ingested by marine fauna and easily break up into microparticles of plastic once in the Ocean.

Find out more

State of California Assembly site, *Assembly Bill n°2779*
https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB2779

14

SAN FRANCISCO REQUEST FOR BETTER DESIGN FOR BEVERAGE CONTAINERS

COUNTRY
USA.

TYPE OF MEASURE
Request to the State of California to modify legislation controlling the production of single-use beverage containers (25% minimum recycled plastic).

MEANS USED
Communication.

PARTIES CONCERNED
State of California, beverage container producers.

STATUS
Finalized (2016).

In 2016, the City of San Francisco asked the State of California to modify legislation to make it compulsory for beverage container production to include at least 25% recycled plastic.

San Francisco City Council justified this decision in several ways. The first was the ecological cost of producing containers using virgin plastic which is very costly in terms of energy and raw materials. The second was the inconsistency between the high recycling rate (85%) in the State of California and the export of this recycled plastic to Asia. And, last but not least, that it would be more advantageous for the State to concentrate its economic activities in its own region and to use the recycled plastic locally.

On 6 June 2016, the city adopted resolution n°217-16 calling directly on the State of California asking it to modify legislation. Following this request, the State of California modified the law on hard plastic containers to bring it in line with San Francisco's request.

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Find out more

City of San Francisco Department of the Environment site, *Resolution n°217-16*
https://sfenvironment.org/sites/default/files/fliers/files/sfe_zw_bevcontainer_recycledcontent_resolution.pdf

Provide financial incentives for promoting the development of eco-design

In addition to legislation, public authorities can provide economic incentives to promote the development and use of eco-design. In this respect, they can take action by promoting eco-designed models which have reduced environmental impact throughout their lifecycle and by encouraging related research and development.

15

COSTA RICA ECO-DESIGN INVESTMENT

COUNTRY
Costa Rica.

TYPE OF MEASURE
Investment plan for improving the eco-design of single-use plastic.

MEANS USED
Research and development.

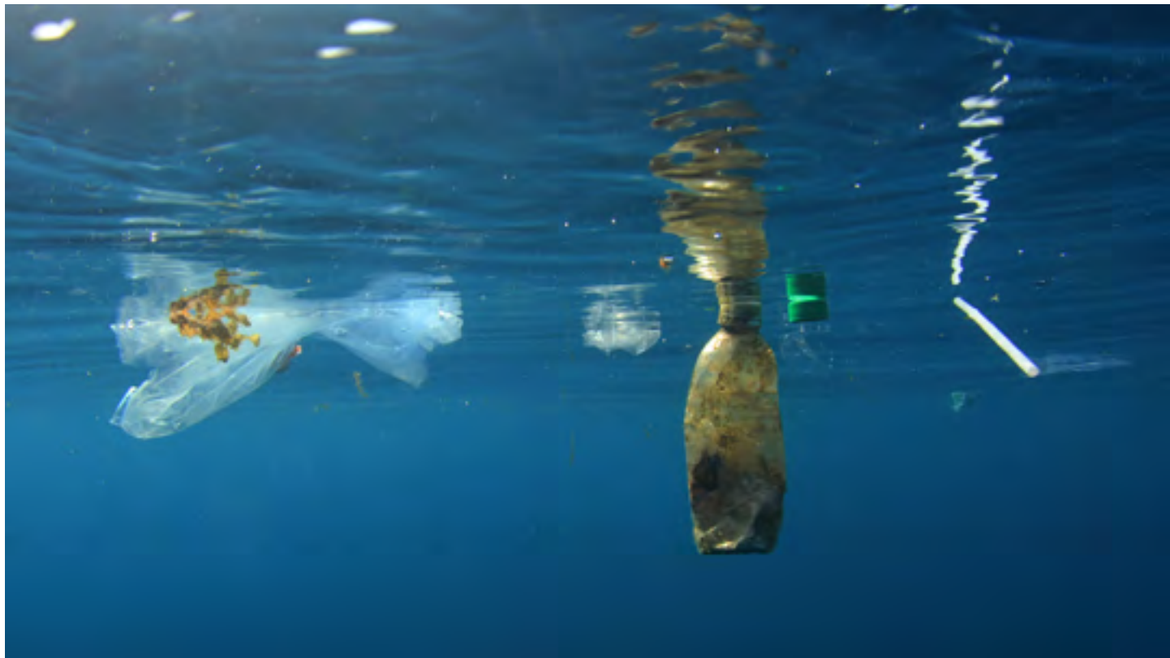
PARTIES CONCERNED
Producers, scientists.

STATUS
Ongoing (2017-2021).

In 2017, Costa Rica, with a population of almost 5 million, decided to launch a large-scale project targeting the elimination of single-use plastic — including plastic bottles — throughout the country. Costa Rica has undertaken its project in partnership with the United Nations Development Programme (UNDP) and should see a successful outcome by 2021.

On 18 July 2017, Edgar Guttiérez, Minister for Health, the Environment and Energy, launched his project comprising 5 key parts including the development of alternatives to single-use. The project proposes in particular to invest in research and development to improve the eco-design of single-use plastics and targets plastic bottles in particular. It intends to involve businesses, producers and scientists to ensure product production and end-of-life treatment are more environmentally-friendly.

Find out more
UNDP site, *project presentation*
http://www.undp.org/content/undp/en/home/blog/2017/7/14/Costa-Rica-abre-el-camino-hacia-el-fin-de-los-pl-sticos-de-un-solo-uso.html



Watch out for fake 'good' solutions

More and more plastic bottles said to be “biodegradable” are hitting the market, but they are not necessarily a good solution as they are also sources of pollution.

Under the action of micro-organisms, biodegradable plastics can break down (degrade) into natural elements (water, carbon dioxide, biomass). They may be made from organic materials (sugar, starch or lignocellulosic biomass) or from oil, and are only compostable under specific conditions. To date, no finished product (end product) has yet been approved as biodegradable in the marine environment and the EN 13432 European standard for packaging compostability only guarantees packaging bio-degradation under non-domestic, industrial conditions.

Whether they are biosourced and/or biodegradable, these plastics can disrupt sorting and recycling pathways. Their complex composition requires the implementation of specific treatment pathways (of recycling and/or industrial composting pathways) which do not always exist. Without these pathways, the plastics end up in landfills, buried in landfill or incinerated and, just like conventional plastic, produce greenhouse gas emissions and have an adverse impact on the environment.

Furthermore, the lack of knowledge about the concept of biodegradability may increase leakage into the environment and consumers may, as such, be misled as to the no-risk impact of these products on the natural environment. Moreover, this does not change how consumers use the plastic... single-use then disposable, and does not reduce production. Replacing conventional plastic with bioplastic would mean using hun-dreds of hectares of land to produce it which, in turn, would impoverish the soils, would lead to land conflicts (agricultural land occupation), a potential loss of natural habitats, and the use of substantial water resources.

Your best bet is to choose a reusable bottle and eliminate all single-use packaging, no matter what type, from your life!

04

Improve end-of-life: optimize collection and recycling

Why?

“Nothing is lost, nothing is created, everything is transformed”
Antoine Lavoisier

In addition to reduction and reuse initiatives, the disposal of bottles as waste needs to be improved on to ensure they are all collected and recycled.

Recycling is not a solution in itself, as it is likely to increase upstream production which requires the use of raw material energy, and given its high energy consumption. Nevertheless, recycling provides a part-answer to the issue of bottles in the environment by giving them economic value: the plastic bottle is no longer considered as 'waste' but as 'secondary raw material'. To limit accidental and deliberate leakage of plastic bottles into the environment it is necessary to optimize the waste collection and treatment system and to favour recycling over incineration or landfill (burying), which impact the environment more.

Improving plastic bottle recycling means improving recycling as a whole. This means integrating the most widespread and most effective collection possible of all waste so it can be recycled.

How can public authorities become involved in this?

Public authorities responsible for waste management, collection and treatment, should endeavour to improve plastic bottle end-of-life. To ensure they are all collected and recycled and that none end up in the environment, public authorities should do their utmost to optimize waste collection, sorting and recycling, by drawing on all parties involved in the chain and on extended producer responsibility.

Optimize the bottle collection system

Optimizing recycling means optimizing waste collection. As such, public authorities must implement effective, innovative collection and sorting systems and infrastructures, like a deposit-return system.

16

ESTONIA
IMPLEMENTING A DEPOSIT-RETURN SYSTEM

COUNTRY
Estonia.

TYPE OF MEASURE
Implementing a deposit-return system for PET plastic bottles.

MEANS USED
Development.

PARTIES CONCERNED
Citizens, traders, producers .

STATUS
Finalized (2004-2005).

In 2004, Estonia, a country with 1.3 million inhabitants, voted then, in 2005, rolled out a pay-deposit-return system for several types of container including plastic bottles. The extended producer responsibility organization, Eesti Pandipakend (EPP), is in charge of managing this.

Through a Ministry for the Environment initiative, the system adds on an extra €0.10 when plastic EPP-marked bottles are purchased. This extra cost is then refunded to consumers when they deposit the bottle(s) at collection points, in the form of a redeemable voucher. EPP is in charge of transport and sorting.

This Estonian deposit-return system, which has been running for almost 15 years now, is one of the most efficient in Europe, with 90% of plastic bottles collected and 85% recycled.

Find out more
Website of the deposit-return scheme's system operator, *Eesti Pandipakend*
https://eestipandipakend.ee/en/

From single-use to reusable, bottle deposit-return

Glass
Bottle deposit-returns have several advantages over plastic bottle recycling deposit-returns:

- Over the short-cycle, they reduce the carbon footprint and provide jobs on a local level
- They are more ecological than recycling, which continues to be a highly energy-intensive process
- They are more economical for producers who recover the bottles directly

They enable the reuse of glass bottles up to 50 times over. Once the bottles are collected, they are recovered by the producers who wash them so they can be refilled. This system, used in France until the 1990s, is currently used in Belgium, Switzerland and Germany.

Aluminum/Stainless steel
Aluminum bottle deposit-return is being experimented in the United States by the company Boomerang. As light and durable as plastic, those aluminum bottles re made to be collected, sanitized and the refilled up to four times.

17

KAMIKATSU ZERO-WASTE GOAL BY 2020 (45 WASTE-SORTING CATEGORIES)

COUNTRY
Japan.

PARTIES CONCERNED
Shopkeepers, companies,, citizens, politicians present in the town.

TYPE OF MEASURE
Optimizing waste collection to reach 100% recycled waste by 2020.

STATUS
Ongoing (2003-2020).

MEANS USED
Territory planning, incentives.

In 2003, the village of Kamikatsu and its 1,700 inhabitants decided to implement an optimized waste collection system to reduce the percentage of waste buried in landfill or incinerated to zero.

After burning its waste for several years, the municipality had to deal with a myriad of environmental and health issues. Moreover, this practice was contrary to the overall goals of the Kyoto Protocol of reducing greenhouse gas emissions. As such, it decided to fundamentally rethink its waste management system. On 19 September 2003, the village adopted a project to recycle 100% of waste by 2020. The initiative implemented by the village is designed to provide a solution to the issues its inhabitants have had to deal with as well as to broadcast a message to its Prefecture (Tokushima) and to the country as a whole to develop the infrastructures required to better manage waste. The project also wishes to promote sharing best practices with other municipalities.

As such, the village of Kamikatsu implemented a sophisticated waste collection system progressively introducing different waste-sorting categories to reach a total of almost fifty today. Two specific categories are reserved for PET plastic bottles and their caps.

In 2015, the village recycled 80% of all its waste.

Find out more

Kamikatsu village site, *Zero-waste project*
http://www.kamikatsu.jp/zerowaste/

18

KENYA GOVERNMENT ULTIMATUM TO PLASTIC BOTTLE PRODUCERS TO IMPLEMENT A DEPOSIT-RETURN SYSTEM

COUNTRY
Kenya.

MEANS USED
Communication, incentives.

TYPE OF MEASURE
Obligation for plastic bottle producers to implement a deposit-return system, failing which a total ban on those latter will be enforced.

PARTIES CONCERNED
Plastic bottle producers.

STATUS
Ongoing (2018).

Following the ban on plastic bags, in January 2018 the Kenyan Government decided to put pressure on plastic bottle producers to impose the implementation of a countrywide deposit-return system.

Every year, almost 50 million plastic bottles are consumed in Kenya and the vast majority end up in the environment. To tackle this issue, the National Environment Management Authority (NEMA) decided to put pressure on plastic bottle producers to strengthen their accountability and to improve their end-of-life product management. The government also threatened to impose a total moratorium on plastic bottle production as of 30 April if no efficient deposit-return system plan had been presented.

The ultimatum worked and the government announced that it abandoned the idea of imposing a total moratorium given the advanced stage of negotiations concerning the deposit-return system.

Find out more

Kenyan independent press The Daily Nation,
Article on the government's announcement
https://www.nation.co.ke/business/Plan-to-ban-plastic-bottles-stopped-days-to-deadline/996-4535466-t01dt0z/index.html

Promote waste treatment and recycling optimization

As well as implementing an efficient collection system, waste treatment should be optimized through effective sorting by developing the infra structures necessary and by informing citizens and raising their awareness. To do so, public authorities can develop several tools: a waste reduction plan, support for the various parties concerned and even financial incentives for recycling.

“Show me your logo and I'll tell you if you're recyclable“

Visual and indicative, logos are a fast and easy way to identify eco-friendly products. For recycling, several logos (symbols) exist but they have different meanings:

The green dot means that the product producer has made a financial contribution towards the waste recovery and recycling organizations. This does not mean that the product packaging is recyclable.

The Mobius loop aka the three green arrow triangle means that the product packaging is recyclable.

This label means that the packaging is in recyclable plastic. The number corresponds to the Resin Identification Code, the type of plastic the package is made of.

The EU ecolabel is the only official European ecolabel. It takes the whole product lifecycle into account, from raw materials through to end-of-life and, as such, recycling.

19

DUNBAR
ZERO WASTE DUNBAR

COUNTRY
Scotland.

TYPE OF MEASURE
Recycling improvement project targeting 70% of waste recycled.

MEANS USED
Mobilization, incentives, targets.

PARTIES CONCERNED
All parties present in the town.

STATUS
Finalized (2014-2017).

The "Dunbar Zero Waste" project was implemented from September 2014 to March 2017. This was a pilot community engagement project stemming from the "Zero Waste Scotland" plan scheduled for 2025.

Organized by the Sustaining Dunbar Association and following the commitment of several local stakeholders, the project was financed by Zero Waste Scotland. It works "towards a vision of a place where people see waste as a resource" and targets a result of around 70% of recycled waste at the end of three years.

To reach this goal and to involve as many people as possible, tools for encouraging and mobilizing the population were rolled out: a social media communication campaign, direct interaction with citizens via door-to-door exchanges, event organization and the set-up of the "Dunbar Zero Waste" store in the town. These get-togethers were an opportunity to rally inhabitants to the project and the set-up of a "zero waste" office provided support for them as they initiated the process. 270 students also pledged to recycle waste. At the end of the project in March 2017, although the 70% target had not been reached, mobilization was active and a higher rate of recycling had been implemented.

Find out more

Zero Waste project site
https://zerowastetown.org.uk/

20

THE AUTONOMOUS COMMUNITY OF CATALONIA
WASTE DISPOSAL TAX

COUNTRY
Spain.

TYPE OF MEASURE
Tax on waste incineration and landfill.

MEANS USED
Tax.

PARTIES CONCERNED
Local authorities.

STATUS
Finalized (2004 and 2008).

Article 16 of the Spanish Waste Act allows autonomous communities to apply economic incentives to promote better waste management. Landfill and incineration tax were introduced in Catalonia in 2004 and 2008 respectively in an effort to divert waste as much as possible away from these practices impacting the environment.

Although the landfill tax generated 32.2 million euro of revenue over its first year, with taxes initially standing at €10 per tonne for landfill and €5 per tonne for incineration, these charges were thereinafter increased. In 2010, they stood at €20 for landfill and €15 for incineration. 50% of the revenue generated by this tax is invested in optimizing the eco-friendly organic waste treatment system. The remainder is refunded to municipalities based on how effective they are in collecting organic waste separately.

The introduction of these taxes is substantiated by three key goals:

- Economic sanctions for poor waste management practices (incineration and landfill) pursuant to EU legislation
- A twofold incentive for promoting recycling by making bad practices more expensive and by generating revenue through recycling
- By generating revenue for the region and enabling it to invest in financing infrastructures and action plans to optimize the waste management system

This, in turn, resulted in an increase of waste collected separately from 22% in 2004 to 39% in 2012.

Find out more

Catalonia Regional site, Page on waste disposal taxes
http://residus.gencat.cat/en/ambits_dactuacio/tipus_de_residu/residus_municipals/canons_sobre_la_disposicio_del_rebuig_dels_residus_municipals/

05

Inform citizens and raise awareness

Introduction

“Well informed, people are citizens.”
Alfred Sauvy

Ecological transition cannot happen without everyone being involved. It is vital to inform, raise awareness and mobilize as many people as possible to ensure they understand and become involved in this transition. This makes it easier to move forward from a society of mass consumerism to one which is eco-responsible, eco-friendly and fully aware of its environmental limits. To accompany, legitimize and ensure the effectiveness of change, citizens need to be made aware of the challenges, the issues and must become proactive players in this transition.

Municipalities, which have frontline contact with citizens, can become fully involved in this awareness-raising by informing citizens about the reasons and the solutions which justify and accompany this change.

Why put an end to plastic bottles?

Consumers need to be made aware of the pollution caused by plastic bottles and, as such, the need to reduce their production and their consumption:

Reasons

Ecological: inform about the two-fold pollution caused by plastic bottles. On the on hand, plastic bottles leave a high ecological footprint, from their production through to their end-of-life: use of raw material and fossil energy, greenhouse gas emissions for producing and transporting plastic bottles, conditions and impacts of their end-of-life treatment (recycling, incineration, landfill). On the other hand, their presence in the environment is harmful, plastic and its degradation have various impacts on the marine fauna and flora.
Health: inform about potential impacts on Human health from plastic and its degradation.
Economic: inform about the cost consumers pay.

The means

To inform citizens, there are different means:

- **Awareness and communication campaigns :** displays, posters, bill boarding, digital communication, publications, dedicated events.
- **Providing clear information which is easily-accessible to consumers :** product labelling, information sites.

Blue Planet II, the series which made the Queen of England take a stance

The documentary series *Blue Planet II* broadcast in 2017 by the BBC and produced by Sir David Attenborough met with huge success in the UK. This 7-episode series, focusing on marine biodiversity and the risks caused by plastic pollution, played a key role in making people aware of the issue. To the point where, after watching an episode, Queen Elizabeth II decided to ban single-use plastic from Buckingham Palace.
www.bbc.co.uk/programmes/p04tjbtx

How to live without plastic bottles?

By adopting a positive ecological approach, offering consumers alternative solutions which have reduced impact on the environment and, as such, address the plastic bottle pollution issue:

Solutions

Education
It is necessary to enhance knowledge about the environment, notably the key role of biodiversity and marine and land ecosystems, how they work and why they must be preserved to save our planet. Teach eco-gestures, eco-actions to be adopted to reduce our environmental footprint and adopt eco-friendly consumption such as reducing and sorting waste, recycling and composting, the eco-friendly alternatives available, repairing, reusing and using differently, "zero waste" initiative.

Environmental information
It is necessary to explain the signification and value of the various ecolabels, ecological footprints present on products.

The means

Too enhance environmental education and spread the word, different means are available:

- Integration in school/educational curriculum, courses and dedicated conferences
- Creation of videos, conferences, lessons, graphics and communication campaign
- Implementation of clear information accessible to everyone
- Development of tools such as environmental labels or incentive pricing.

Zero Waste's “5Rs”

The “5Rs” rule corresponds to five habits to adopt to reduce waste:

1. Refuse anything not needed
2. Reduce everything needed
3. Reuse what's been consumed
4. Recycle what can't be reused
5. Return to the earth everything compostable

This rule, which initially included only reducing, reusing and recycling, was extended to include the vision that we can reduce pollution at source by ending our consumption of anything we don't need.

For a plastic-bottle-free Ocean

To address ever-growing plastic bottle pollution, numerous stakeholders are rallying together to endeavour to reduce this scourge at source. Municipalities, where there is high human concentration and intense consumption, are particularly targeted: primary pollution sources yet hotbeds for solutions.

This guide gathers together a non-exhaustive list of initiatives for reducing plastic bottle pollution at various levels: from optimizing collection through to recycling, and to a total ban in favour of free access to plastic-packaging-free water.

This guide, designed for public authorities, businesses and citizens, aims to inform, raise awareness and promote best practice sharing.

Every challenge has its solution and every municipality is different, so it is vital to tailor these best practices to different situations. An initiative, action, measure can only really be accepted, coherent and effective if citizens agree to it, so, they need to be kept clearly informed and if possible, involved all along the process.

Plastic bottles are only the visible tip of the iceberg, of the overall issue: plastic pollution. Today, the omnipresence of plastic in our societies raises a myriad of questions whose answers are already-worrying yet could turn out to be catastrophic tomorrow. We need to rethink, reshape our patterns of behaviour, growth, production, consumption and consider them in an environmental perspective. This applies to our ability to protect ecosystems, their inhabitants as well as ourselves from this growing pollution.

Discover Surfrider's different plastic pollution campaigns:
Reset Your Habits
www.surfrider.eu/en/resetyourhabits/
Ban the Bag
www.surfrider.eu/en/ban-the-bag/
Or contact us:
dbeaumenay@surfrider.eu

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