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Treasure not Trash

Waste prevention strategies and ideas

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Introduction

When we have something we no longer need, we throw it away. This has consequences: according to the United Nations Environment Programme, more than seven billion tonnes of waste is produced worldwide each year, of which more than two billion tonnes is municipal waste. Every kilogram of waste started out as a raw material from our natural environment that was then turned into a product using energy, water, air and human labour. And the pressure on ecosystems is steadily increasing, because the growing global population and sustained economic growth are leading to rising consumption of goods and raw materials.

But what exactly does this mean? It means that we – as governments, companies or ordinary people – have to find new ways of doing things. Many entrenched structures and long-standing habits need to be carefully examined: Do we have the right legal framework? How can companies produce goods more sustainably? Do we really need single-use items such as takeaway coffee cups or plastic plates? Do we need to drive heavy cars made of huge amounts of raw materials? Do we have to keep up with short-lived trends and buy the latest fashions every season? Everyone has something to say on the subject and the list of questions seems endless.

What can we do in practice? A lot! However, this means having the right frameworks in place, enough alternative options for action, transparent information – and last but not least the willingness to do our part. The purpose of this brochure – Treasure not Trash – is to present specific ideas on how to prevent waste and help consumers make good choices. It aims to support active public dialogue about waste prevention, a dialogue that you, too, can be part of: if you actively work to prevent waste, tell others about it. Explain to people around you – family, friends, customers, employees, guests – why you are making a change. This will motivate others to take action themselves.

The **tips and recommendations** are intended for private individuals, but also for decision-makers in companies, municipalities and public institutions like schools or universities. Each and every one of us can play a role through what we do. There are, of course, countless other possible ways of preventing waste.

Waste prevention is a process involving the whole of society, not just an individual programme or a package of government measures. And there are many things that can't be enforced by laws.

Waste prevention strategies (pages 6 to 26)

There is no ready-made blueprint for successfully preventing waste. What is needed, then, are not just measures targeted at individual products or sectors, but also overarching strategies that can be applied as broadly as possible:

- use products for longer
- enable consumers to make sustainable choices
- improve product design
- create market incentives

Material flows – practical measures to reduce waste (pages 28 to 47)

Whether private individuals, companies, retailers or municipalities – each of these actors can make an important contribution to waste prevention. This is true in almost every area of life: from building and housing to clothing and food, not to mention washing and cleaning.

One key issue is the approach to single-use products, i.e. items that are only used once and then thrown out right away. As these products are of little value, we tend to dispose of them more carelessly than other products so they end up in the environment. There are many materials and products where the amount of waste could be significantly reduced if people were more aware of how they shop and consume goods. This includes packaging, food and textiles, whereas in other areas, such as electrical appliances, electronics, batteries, building materials or laundry detergents and cleaning products, it is mainly retailers and companies that need to take action. This brochure contains practical recommendations and useful tips on how to prevent unnecessary waste and contribute to protecting the environment and conserving resources. It also features examples of relevant initiatives and projects.

Prioritise

repair over disposal

EXTEND THE USEFUL
LIFE OF PRODUCTS

The washing machine stops working and the teddy bear loses an ear. When something breaks, we tend to replace it with a new product instead of repairing the old one.

This means that products that have not truly reached the end of their useful life end up in the bin. There are many reasons: some products are simply not suitable for repair because of the way they are designed. Other products cannot be repaired because spare parts are no longer available or repairing them is too complicated. In many cases, it is more expensive to repair a product than to buy a new one, or there is no repair shop nearby. The goal must therefore be to simplify the process of repairing appliances, electronics, textiles, furniture and toys so that they can be used longer.



Examples of projects and initiatives

Fix things together, use them for longer

Many towns and cities now have repair cafés where tools and information are available to help people with repairs. Guided by the principle of helping people help themselves, skilled volunteers are on site to lend a hand if needed.

A round table for repair

The Round Table Repair Germany is comprised of environmental organisations, consumer protection initiatives and repair centres working with the private sector and the scientific community. It aims to encourage the repair of products, thereby extending their useful lifespan.

(www.runder-tisch-reparatur.de) (only available in German)

What can I do as a consumer?

- If a product is defective, make use of your two-year warranty claim for a repair instead of it in for a new one.
- Use the services provided by repair cafés, workshops, tailors and others that offer to repair products.
- When shopping for a new product, look for repair-friendly design, for example products certified with the Blue Angel ecolabel.



What can I do as an economic operator or municipality?

Retail

- In the shop: provide information for customers on whether and how a product can be repaired.
- Offer repair services in the shop – for instance the services of an in-house tailor.
- In the event of warranty or guarantee claims: offer to repair the product instead of supplying a new one.



Manufacturers and companies

- Develop repair-friendly products that can be disassembled, for example, without being destroyed and can be repaired using standard tools.
- Keep the necessary spare parts in stock.
- Make repair manuals and videos available online.
- On the packaging: provide information for customers on whether and how a product can be repaired.



Municipalities

- Inform the public online or in information leaflets where items can be repaired.
- Provide locations for repair cafés.



Prioritise reuse

over disposal

USE PRODUCTS UNTIL
THE END OF THEIR LIFE

Have your children grown out of their clothes? Do you need a better computer but your old one is still working fine? Often, something you want to get rid of may still be of use to others. It makes particular sense to reuse products that have only been in use for a short time like children's toys, books, clothing and sports equipment.

Reuse not only prevents waste, it also benefits the community: consumers often find inexpensive products on second-hand platforms online that they wouldn't be able to afford new. Moreover, second-hand stores in many towns and cities create jobs for people to rejoin the labour market.



Examples of projects and initiatives

A different kind of store

Second-hand stores enable goods that are still in working condition to be reused. Today many cities have these kinds of stores or pop-up stores that appear in a particular location for just a short time. The products they sell are sourced collected unwanted bulky household items, for example, or from recycling centres, private donors or house clearances. Before they are sold, the items are inspected and if necessary refurbished or repaired.

Buy second-hand with the click of a mouse

Online second-hand platforms are marketplaces where you can sell, buy, swap or give away used items in good condition. If you limit your search to places nearby you can save on postage and collect the item directly from the seller.

What can I do as a consumer?

- Rather than throwing away items that you no longer need, sell or donate them.
- You may often find second-hand products that are of higher quality than cheap new goods.



What can I do as an economic operator?

- Put up shelves for books or place “reuse boxes” at suitable locations in companies, for example in canteens.
- Rather than throwing away returned items or surplus stock, sell them as second-hand products or donate them.
- Create your own sales platform for used products.
- Introduce a return and reuse scheme or join an existing one.



What can municipalities do?

- Offer pop-up stores empty retail space to sell used products.
- Support local or regional second-hand stores.
- Keep the public informed about second-hand items for sale locally, provide information online and in information leaflets.



Prioritise use

over ownership

SUPPORT SUSTAINABLE
CONSUMPTION

Did you know that, on average, cars stand around unused for 23 hours every day? There are many other products, too, that cost a lot of money and then go unused. When this happens, a good alternative to buying is sharing rather than owning something. For instance, you can use online platforms to share a lot of products with people who live nearby. This not only saves on the initial outlay, it also helps to significantly reduce the volume of products that at some point down the line will end up as waste. More and more consumers are reluctant to be tied to a product for the long term, but just want to use it when they need it. Today, many companies offer these kinds of services and are making use of the new business opportunities created by sharing.



Examples of projects and initiatives

Hire tools, don't buy them

Many DIY stores offer equipment for hire by the hour or day, such as power drills, pressure washers, building dryers or gardening equipment. This means you can tackle DIY tasks without having to buy expensive special equipment.

A bike on subscription?

Hiring instead of buying – now some bicycle companies offer this service too. The bike is delivered to your door free of charge and you get free repairs and a fully functioning replacement if you need one.

Spotlessly clean with a rented machine

Carpet cleaning machines can be rented for up to three days from certain household stores and DIY chains. You don't need to buy the machine; the cleaned upholstery and carpets look good for longer, and they last longer too.

What can I do as a consumer?

- Consider whether it might make sense to share, hire or lease certain products. Many products can be used collectively by neighbours in a community.
- In large cities, there are more and more car-sharing services. Car sharing is especially attractive for people who drive fewer than 10,000 kilometres per year.



What can I do as an economic operator?

- For many companies, the trend of sharing rather than owning creates new market opportunities, for instance in the form of rental services.
- The building management sector can support this trend by providing parking spots for shared cars, for example, or spaces to store shared gardening equipment.



MOTIVATION FOR WASTE PREVENTION

Encourage wise

decision-making (nudging)

The term “nudging” has its origins in behavioural psychology. Nudging makes use of insights gained in this field and meets people’s need for simplicity, convenience and habit. Through gentle prodding, it paves the way for people to take alternative courses of action, using positive stimuli rather than rules or bans. Subtle incentives are intended to break people’s habits and facilitate smooth changes in behaviours. While the person “nudged” still has the freedom to choose, a gentle push in the right direction is meant to make it easier for them to opt for the more beneficial alternative.



Examples of projects and initiatives

How much water do I use?

A meter installed in the shower is a motivation to save water and energy. A similar solution, applied to waste, could help people gauge how much waste they produce and encourage them to reduce it.

Hotels: using towels more than once

Many hotels have had very good experiences with nudging their guests to adopt environmentally friendly behaviour. Signs in hotel bathrooms raise guests’ awareness that using towels more often is good for the environment or that 75 percent of guests use their towels more than once. In the best-case scenario, guests then adjust their behaviour and do not ask for a fresh towel every day.

What can I do as a consumer?

- Be more aware when making choices.
 - Example: check the default settings on printers (usually single-sided printing) and switch to double-sided printing.
 - Where possible use a shopping basket rather than a big shopping trolley since it can look emptier and entice you to buy more.



What can I do as an economic operator?

Retail

- Position environmentally friendly products where customers can easily access them.
- Staff at checkout should ask whether the customer needs a receipt; if not, do not print one.
- Put up signs in the store to encourage waste prevention.



Restaurants and hotels

- Use small plates at buffets.
- Put signs on hand towel dispensers in the toilets to limit use to one or two hand towels.



Manufacturers

- Ensure that the default settings on devices are better for the environment, such as the double-sided setting on printers.
- Identify products with little packaging and display the amount of packaging saved on the packaging.



What can municipalities or educational institutions do?

- Provide tap water in canteens and during events.



Use ecolabels and environmental certifications

RELIABLE INFORMATION
FOR CONSUMERS

Reliable information about the environmental quality of individual products is very helpful when it comes to preventing waste. In people's everyday lives, they often do not have the time to find out how many resources have been used in the manufacture of a product or how much waste has been generated. Well-established and credible product labels provide guidance here.

Examples of projects and initiatives



Blue Angel

For more than 40 years, the Blue Angel ecolabel has been informing consumers of products' eco-friendly attributes to make consumer choices easier. The label is awarded by an independent jury according to specific criteria, such as the raw materials and energy used, the content of harmful substances, durability and any waste generated.

(www.blauer-engel.de/en)



What can I do as a consumer?

- Pay more attention to ecolabels like the Blue Angel when deciding which products to buy. 92 percent of the population are familiar with the Blue Angel – but only 37 percent consider it relevant in their consumer choices.
- The website www.siegelklarheit.de (only available in German) provides extensive information on various eco-labels to help you navigate through the maze of labels.



What can I do as an economic operator?

Retail

- Products that are locally sourced and particularly eco-friendly should be identified as such so that customers can take this into account when choosing what to buy.
- Provide explanations of labels on the products in your store.
- List products with the Blue Angel ecolabel.



Restaurants and hotels

- The Blue Angel label uses simple and transparent criteria to enable companies to prevent waste in their own procurement and, in many cases, reduce costs over the entire life cycle of a product.
- Manufacture products that meet the criteria for certification.
- Advertise products that have been awarded ecolabels.



Make online shopping

more sustainable

REDUCE WASTE
IN RETAIL ORDERS

Online shopping is booming – and that means the number of parcels that need to be shipped has skyrocketed. Transport uses energy and causes emissions, but also increases the volume of waste because shipping packaging is only rarely re-used, and often contains additional material to fill up oversized boxes.

The large number of returns is an especially critical factor, as some returned goods are simply disposed of straight away, meaning that new products end up in the rubbish unused. Many products are returned when free shipping is offered. Clothing, but also electronics, is also frequently sent back. By introducing a “duty of care”, the amendment to the Circular Economy Act makes it mandatory for retailers, especially online retailers, to ensure that returns and excess stock are kept in a usable condition and are not discarded for purely economic reasons.



Examples of products and initiatives

Information can stem the flood of returns

In order to reduce the number of returns, many online and mail-order retailers put up information about their products on their websites. If they notice that a specific item is sent back very often, they check it to try and remedy the cause. In addition, customers who order an item of clothing in three or more sizes are actively advised that returning purchases causes unnecessarily high CO₂ emissions.

Trying on clothes online

Meanwhile, some companies have introduced a kind of ‘virtual changing room’: customers can upload pictures or allow protected access to their computer’s camera, enabling them to preview how the item of clothing would fit their body shape. This reduces the chances of buying the wrong item.

What can I do as a consumer?



- Check whether the product you want is also available in nearby shops, where you can try on clothes in different sizes and colours without having to send any back.
- Plan your online shopping and combine multiple orders into one single order – this saves packaging material.
- Read the descriptions from retailers and customer reviews to see whether the actual sizes tend to be larger or smaller than usual. This helps prevent unnecessary returns.

What can I do as an economic operator?

Retail



- Charge customers for returns to reduce the number of packages sent back.
- Consider donating returned items and clothes from previous seasons that are not offered for sale again.
- Set up your own online second-hand shop for selling returned goods.
- Offer only payment methods that discourage returns to customers who send back parcels particularly often (advance payment, instant bank transfers, direct debit).
- Describe products as accurately as possible and provide lots of photos.
- If the goods are already packaged in a sturdy box, do not add other packaging material.

Education – information

and awareness-raising

**MORE KNOWLEDGE ABOUT
WASTE PREVENTION**

Did you know that, in 2016, households in Germany produced 462 kilograms of waste per person? Do you know how you can prevent waste in your household? Information campaigns, projects in schools and universities, city-wide action days – there are plenty of ways to raise awareness of waste prevention, resource conservation and circular economy. These kinds of educational initiatives mainly focus on children and young people so that they learn about waste and its impact on the environment early on in life.



Examples of projects and initiatives

Zero Waste project days in Berlin schools

In 2018, the Senate Department for Urban Mobility, Transport, Climate Action and the Environment, supported by experts from the Wuppertal Institute for Climate, Environment and Energy, launched a zero waste project aimed at schools. Project days are organised at various schools. Prior to the event, teachers receive a folder with background information to prepare for the project and suggestions for lessons. Trained environmental educators then go on “raw material expeditions” with the classes participating in the event. This is followed by a “journey of discovery” around the school building to help students identify the potential for waste prevention at the school on their own.

“Give waste a bin” school project

The Germany-wide school project “Gib Abfall einen Korb” (Give waste a bin) set up by the National Working Group for Nature and Environmental Education (Arbeitsgemeinschaft Natur- und Umweltbildung Bundesverband e.V. – ANU) helps teaching staff incorporate the issues of waste and littering in public spaces into their lessons. In 2016, the project was granted a Network of Excellence award by the UNESCO Global Action Programme on Education for Sustainable Development.

What can I do as a consumer?

- As in other areas, adults should lead by example when it comes to teaching children how to prevent waste.
- Use your social media channels to share how you do your part to prevent waste.



What can I do as an economic operator?

- Inform employees and colleagues which waste prevention measures are (or can be) implemented in the company.
- Take part in the European Week for Waste Reduction and raise awareness among your employees.



Manufacturers

- Organise workshops and provide training on ecodesign or allow your employees to take part in these seminars offered by others.
- Post videos on your website to show how your products can be repaired.



What can municipalities or educational institutions do?

- Talk about waste prevention early on in pre-schools and schools.
- Universities: include waste prevention in the curriculum in relevant courses.
- Take part in waste prevention activities such as those during the European Week for Waste Reduction.
- Carry out and support waste prevention campaigns and put tips on how to prevent waste on your website



Promote product

durability

ENCOURAGE WASTE
PREVENTION IN PRODUCT
DESIGN AND USE

In many cases, products are discarded and replaced even though they have not reached the end of their optimum lifespan or useful life. Studies commissioned by the Federal Environment Agency have shown that items such as electrical devices are not used for as long now as they were just ten years ago. The result is that valuable resources are wasted and the volume of waste has increased.

Replacing a product before it has reached the end of its lifespan is also known as “obsolescence”. In the case of economic obsolescence, a defective item is not repaired because the difference between the cost of repair and the cost of buying a new product is too small. Another phenomenon is psychological obsolescence, which describes the desire for a brand new product even though the old one still works. Different strategies are needed to counteract these two forms of obsolescence.

Examples of projects and initiatives



Smartphone repair made easier

Using click and screw connections in the design of modular smartphones makes it easier to repair components, thus extending the useful life of mobile phones. Manufacturers of these devices also provide repair manuals and supply the right tools. A take-back system saves even more resources, as the returned phones are reused as “second-life” mobiles whenever possible. Defective devices are disassembled, and any parts that still work are used to repair other smartphones.

What can I do as a consumer?

- Ask yourself whether you actually need a new product or whether it would be enough to repair your existing one or replace a few parts.
- Look for long-term durability when deciding what to buy – and let suppliers know this is what you want.
- When buying, look for manufacturer’s warranties, not only the warranty required by law.
- Use reuse and repair services such as second-hand shops, swap platforms, repair cafés or workshops.
- Check for the Blue Angel ecolabel when buying a new product.



What can I do as an economic operator?

- At the development stage, factor in durability and reparability, for example through a standardised, modular design.
- Manufacturers can contribute to increasing a product’s technical lifespan by offering warranties or through leasing, hiring or repurchase agreements.
- Leasing arrangements strengthen customer loyalty to a company. At the same time, manufacturers retain access to their old devices and can thus analyse defects in the products and refurbish or repair the old devices and sell them again (at a lower price).
- Actively promote durability and reparability as features of product quality.



Ecodesign – reducing

environmental impacts

DESIGN THAT
MINIMISES WASTE

Ecodesign is a comprehensive approach to creating new products. The aim is to reduce the environmental impact of a product over its entire life cycle. Criteria such as reparability, replaceable components, potential for reuse and durability are all taken into account from the outset, i.e. during product planning and design. Case studies show that life-extending product design can significantly reduce waste.



Examples of projects and initiatives

Prizewinning designs

Every year since 2012, the German Ecodesign Award has recognised particularly innovative and sustainable products, services and strategies. The award-winning products, services and strategies must demonstrate outstanding environmental quality as well as an innovative approach and high design quality. The competition is aimed at companies, designers and students.

Toolbox for product design

The Ecodesign Kit is an education and information portal for students and teachers aimed at making products more environmentally friendly. It contains materials and information on issues related to environmental impact, materials and processes, as well as ecodesign principles and analysis and evaluation methods.

What can I do as a consumer?

- Find out whether a product can be repaired before replacing it with a new one.
- Look for the Blue Angel ecolabel when buying a new product.
- Consider product durability and ask yourself whether a second-hand or refurbished device would suit your needs.



What can I do as an economic operator?

- Use robust and durable materials.
- Design modular products using standardised components so that they can be easily disassembled, then cleaned, repaired and reused.
- Ensure that spare parts are available and customers are aware of this.
- Provide regular software updates for products with digital content.



Introduce cost

COST SAVINGS THANKS
TO WASTE PREVENTION

accounting to prevent waste

There are financial benefits to preventing waste. Reducing waste enables companies to save costs in many areas, from procurement to storage, processing to transport, and, of course, disposal. All too often, though, this potential is not fully tapped. A lack of transparency means that many companies do not know the overall costs of waste generation. Using (financial controlling) instruments to help monitor the costs of waste can help tap the economic potential of waste prevention.



Examples of projects and initiatives

Expertise for industry

The VDI Centre for Resource Efficiency (VDI ZRE) pools available technical know-how on ways of making more efficient use of materials and energy in industry. The website www.resource-germany.com presents sector-specific information for companies operating in a wide range of sectors, from construction to chemical engineering.

North Rhine-Westphalia: resource efficiency for industry and skilled trades

The Effizienz-Agentur NRW (EFA NRW) aims its services at industrial companies and skilled trade enterprises in the German federal state of North Rhine-Westphalia, providing advice on resource efficiency in relation to production, ecodesign, maintenance, cost accounting and carbon footprint. In addition, the agency offers training courses, workshops and events for information about funding options, technical developments and best-practice solutions.

Hesse: promoting environmentally friendly production

In Hesse, the PIUS-Beratung and PIUS-Invest programmes (consultancy and investment in production-integrated environmental protection) support companies in their efforts to lower resource consumption.

What can I do as an economic operator?



Companies

- Official bodies and institutions such as chambers of industry and commerce sometimes offer companies initial checks free of charge to identify potential cost savings from waste prevention.
- Integrated cost accounting systems for small and medium-sized enterprises are one way to make the potential for cost savings through waste prevention more transparent.
- Canteens and hospitals: intelligent strategies to preventing food waste can lead to significant cost savings.



Waste prevention strategies

and procurement systems

PUBLIC PRO-
CUREMENT SETTING
AN EXAMPLE

Drawing up waste prevention strategies in companies, public institutions and city administrations presents an opportunity to take a long-term approach to reducing the amount of waste they generate. These strategies can begin by taking stock of the waste currently produced and identifying potential areas where waste prevention can be achieved with minimum cost and effort. The process of developing strategies can provide a chance to pool creative ideas and approaches, with input from as many stakeholders as possible.

In addition, given the high procurement volumes involved, the public sector can also make a significant contribution to waste prevention by focusing procurement more on products and services that save resources and reduce waste and serve as a role model for other economic sectors and consumers.



Examples of projects and initiatives

Kiel University: zero waste

Kiel University (CAU) is the first university in Germany to have implemented a waste prevention strategy. It now saves, for example, ten tonnes of plastic waste by no longer lining every bin in the university's offices with plastic liners.

Berlin: guidelines on public procurement

The administrative regulation on procurement and the environment entered into force in July 2010 (amended in March 2019) with the aim of public procurement that promotes environmentally friendly services and products. In the area of waste prevention, it stipulates that beverages may not be procured in disposable containers nor can disposable dishes/cutlery be purchased for canteens, student cafeterias or for major events.

What can I do as an economic operator?

- Develop your own waste prevention strategies for the whole company or for specific waste streams, sectors or chains.
- Adapt your products to meet public procurement requirements for waste prevention and resource efficiency.
- Use events such as public sector user conferences to inform public sector actors about alternative products that prevent waste so that in future these are included more widely in public tenders.
- Provide information on life cycle costs for individual products: what are the per annum costs of purchase, use and disposal? These costs are often lower for low-waste products.
- Look for eco-standards such as the Blue Angel label, also among your own suppliers.



What can municipalities or educational institutions do?

- Develop municipal waste prevention strategies for your own facilities.
- Draw up guidelines for preventing waste in public procurement and make it mandatory to take account of environmental aspects such as life cycle costs, ecolabels, energy efficiency and energy management systems.
- Provide sustainability training for employees working in procurement.
- Follow guidelines on individual product groups and training materials provided by the Federal Environment Agency (www.umweltbundesamt.de/en/topics/economics-consumption/green-public-procurement).



Disposable dishes



Disposable cutlery, plates and cups are popular, whether at public events or at a barbecue in the park with friends. The problem is that at outdoor events people often throw them away so that they end up in the environment. And waste separation bins are rarely available when eating on the go. Instead, everything is disposed of as general rubbish and can only be used for energy, i.e. incinerated. As a result, disposable products that can actually be recycled are not returned to the material cycle and, at worst, pollute the environment. Reusable dishes are the best alternative in this case – even if it involves some cost and effort. It is important to keep transport distances as short as possible and to use as little water and dishwashing liquid as possible. Most importantly, however, dishes, cups and cutlery should be reused as often as possible. At best, they can be easily recycled at the end of their useful life.

Examples of projects and initiatives



Munich: Oktoberfest

The Munich Oktoberfest is considered a model for environmentally friendly major events worldwide. Since 1991, its waste prevention strategy has included a ban on disposable dishes and cutlery. Drinks come in reusable bottles with a deposit, and food is served on porcelain plates. The containers to transport the goods and the iconic steins must also be reusable. These measures have enabled organisers to reduce the amount of residual waste at the Munich Oktoberfest and other events by more than 50 percent since 1991 (source: Munich Waste Management Company (AWM), 2016).

What can I do as a consumer?

- Take reusable dishes and cutlery with you to barbecues and other outdoor events.
- When attending events or eating in restaurants, choose reusable cutlery and dishes, even though there may also be disposable options.



What can I do as an economic operator?

Manufacturers, companies and the food sector

- Expand your range of reusable products.
- Do not replace disposable plastic products with disposable items made from other materials, provide reusable solutions instead.
- Provide reusable packaging/containers for takeaway food.



Retail

- Offer reusable options rather than replacing disposable plastic products with reusable ones made from other materials.
- Provide in-store information about reusable items instead of disposable ones and the contribution not using single-use products makes to waste prevention.



What can municipalities or educational institutions do?

- Raise public awareness of waste prevention: campaign for the switch to durable and reusable products.
- Bans on disposable plates and dishes in the public sphere encourage the use of reusable items: municipalities can set an example for other actors by showing the different ways reusable items can be used in practice.
- Offer reusable solutions at events.



Disposable drinking cups

(takeaway coffee)



The life of a takeaway coffee cup is very short: after an average of 10 to 15 minutes, it has served its purpose and ends up in the bin. Every year, 2.8 billion disposable cups for hot drinks are thrown away in Germany, 34 cups per person per year. These cups consist of 60 percent plastic-coated paper, with the other 40 percent made entirely plastic. In addition, around 1.3 billion plastic lids are discarded. In terms of volume, the plastic-coated cups alone – the classic takeaway coffee cups – are enough to fill around eight million municipal waste bins each year. If these cups are carelessly thrown away or fall out of overflowing bins, they also pollute the environment. As a result, the plastic used to coat the paper cups ends up in nature. And even if plastic-coated paper cups are collected in recycling bins, they can't actually be recycled. This is because the cups are extremely moisture-resistant; the fibres they contain do not dissolve quickly enough during the paper recycling process. This means that ultimately the cups are incinerated. Reusable products are a good alternative and a good way to avoid disposable cups.

Examples of projects and initiatives



Say goodbye to disposable cups

More and more cities and municipalities are introducing deposit schemes for reusable cups that can be used for hot or cold drinks. Reusable containers can also be useful for transporting other kinds of food. The principle is that customers pay a deposit for the cups in bakeries, supermarkets or cafés and return them there or at a deposit machine after use. Finally, at the end of their useful life – after being washed and reused around 500 times – the cups can then be recycled. Since 2019, resource-friendly reuse schemes for coffee cups have been awarded the Blue Angel ecolabel.

What can I do as a consumer?

- Use reusable cups (your own or the ones offered at the business) if you want to enjoy a coffee or other drinks when you are out and about.



What can I do as an economic operator?

Food sector

- Participate in reuse or pooling systems, such as DE-UZ 210 reusable cup schemes under the Blue Angel ecolabel; information available at: www.blauer-engel.de/en
- Consider offering reusable cups as standard cups and only providing disposable cups on request.
- Offer discounts on coffee and other hot drinks served in reusable cups.
- The lids on takeaway coffee cups are the main culprits for much of their environmental impact. It therefore makes sense to give customers reusable cups without disposable lids.
- Enter into sector-wide agreements containing economic incentives, for instance adding a premium of 20 cents to disposable cups and ten cents to disposable lids.



Single-use bags

REDUCE THE AMOUNT
OF SINGLE-USE BAGS

Disposable shopping and grocery bags have a short useful life and are often used just once. However, there are simple ways of reducing how many are used: if you remember to bring a reusable bag or basket with you when shopping, you don't have to grab a disposable one in the supermarket. Disposable paper bags, because they use more resources, are not a sustainable alternative from an environmental perspective. Bags made from biodegradable plastics are not a good choice either, because manufacturing these materials has a similar environmental impact to that of conventional plastics. Moreover, biodegradable bags are not currently recyclable in Germany and can only be used for energy generation, in other words, they are incinerated.



Examples of projects and initiatives

Charging a fee for plastic bags

In 2016, the German Retail Federation and the Federal Environment Ministry concluded a voluntary agreement aimed at reducing the use of plastic shopping bags. Companies pledged to stop giving away plastic shopping bags for free. Since then, the use of these bags has fallen from 68 per person per year in 2015 to 25 bags a year in 2018. However, this still amounts to a total of two billion plastic shopping bags a year.

Reusable bags have priority

Reusable string bags or small reusable containers are a hygienic alternative to plastic bags for fruits and vegetables. However, this should not result in any financial disadvantages for customers. This is why retailers need to make it possible to deduct the weight of these containers from the weight of the fruit or vegetables at checkout. Stores could also offer reusable string bags or containers for sale.

What can I do as a consumer?

- Use reusable alternatives instead of disposable bags – regardless of the material.
- Certain fruits and vegetables, such as apples and bananas, don't need to be put in bags.
- Bring your own food bags or containers when going shopping.



What can I do as an economic operator?

Retail

- Introduce reuse systems, for example reusable string bags as replacements for plastic food bags or reusable containers for berries.
- Inform customers of the ecological footprint of different kinds of bags, including single-use paper bags.
- Give customers clear information on how reusable containers can be used for food such as cheese, sliced ham or other similar products.
- Encourage customers to bring their own bags, containers or boxes by putting up posters in the shop.



Packaging

REDUCE PACKAGING WASTE

A total of 18.2 million tonnes of packaging waste was produced in Germany in 2016 (Gesellschaft für Verpackungsmarktforschung – GVM, 2018). This figure is 18 percent higher than in 2000 – and is continuing to rise. One of the reasons is changing consumer behaviour: service packaging is needed for food eaten on the go, many types of food are sold pre-packaged, small households buy smaller pack sizes rather than larger ones and more online shopping increases the need for shipping packaging. Furthermore, packaging design is becoming increasingly complex, often leading to the use of more materials, and thus more waste.



Examples of projects and initiatives

Zero-waste shopping

When shopping in zero-waste shops, customers can bring their own containers and prevent packaging waste. The empty containers are weighed and the weight is recorded. The customers then fill the containers with the food they want to buy. The full containers are weighed again at check-out and the empty weight is deducted.

Drink tap water and avoid plastic waste

Using reusable bottles helps reduce the amount of plastic waste we generate. In many cafés, bars and shops customers can have their own water bottles filled with tap water free of charge.

Guidelines for shipping packaging

In September 2015, the Federal Environment Agency published guidelines for eco-friendly packaging for mail order and online retail (www.umweltbundesamt.de/en). The guidelines cover topics such as minimising the amount of shipping packaging and using eco-friendly packaging material.

What can I do as a consumer?

- Choose packaging-free options when shopping, for instance in zero-waste shops or supermarkets offering bulk goods; take fabric bags or reusable containers and string bags when shopping.
- Buy drinks in reusable/returnable bottles, preferably from regional suppliers.
- Drink tap water rather than buying water in plastic bottles.
- Buy locally, as this eliminates long transport routes and food does not need extensive packaging.
- Don't buy snacks in plastic packaging, such as pre-cut fruit; instead buy fresh and regional fruit and cut it at home.
- Buy goods in refillable containers (such as laundry detergents, liquid soap) and make a point of asking retailers if they stock these items.



What can I do as an economic operator?

Retail

- Develop zero-waste strategies for suitable products in combination with efficient and environmentally friendly return and reuse systems.
- Include items in refillable containers in your product range.
- Introduce return and reuse systems at the deli counter and for fruit, vegetables and dry goods.



Manufacturers and companies

- Develop packaging that meets ecodesign criteria, taking account of waste prevention, recyclability and the use of recycled materials.



Around a third of all food produced globally is thrown away. In Germany, this amounts to more than 12 million tonnes of food every year that goes to waste, even though much of it is still edible. Successfully reducing the amount of food that is thrown away would have a positive impact on the environment, as the area of land and amount of energy needed to produce the food could be reduced. Less food waste also means lower greenhouse gas emissions. Reducing the amount of food waste therefore also has a key role to play in achieving the global climate targets under the Paris Agreement.



Examples of projects and initiatives

Too good for the bin

From practical information and tips on planning food shopping and storing food to recipes for leftovers, the “Too Good for the Bin!” (Zu gut für die Tonne!) initiative by the Federal Ministry of Food and Agriculture provides a wealth of information on how to reduce food waste in Germany.

It does not just target consumers but also companies, municipalities and multipliers. The “Restlos genießen” (Dining without leftovers) campaign encourages restaurants and their guests to ensure that leftovers are taken home. In addition, every year the ministry awards a national “Too good for the bin!” prize that recognises initiatives and companies that have developed innovative strategies for preventing food waste. More can be found at www.lebensmittelwertschaetzen.de (only available in German)

Rescue food with an app

A specially designed app enables users to buy leftover food from restaurants, cafés, supermarkets and bakeries and collect it one hour before closing (www.bmel.de/DE/Ernaehrung/ZuGutFuerDieTonne/_Texte/Aktivitaeten-Lebensmittelverschwendung.html) (only available in German)

What can I do as a consumer?

- If you aren't planning to buy much, use a shopping basket instead of a shopping trolley if possible. You'll generally buy less.
- Use online platforms such as www.resterechner.de (*only available in German*), where households can calculate the value of the food they are throwing away.
- Shopping lists and budget planners provide an overview of spending, food actually used and the amount of food thrown away.



What can I do as an economic operator?

Retail

- Retailers such as bakeries selling freshly made goods can, for example, sell leftover products at discounted prices shortly before closing, and advertise this.
- Partner with food banks and other social organisations; donate surplus food.
- Offer food that is past its sell-by/use-by date or bruised fruit/vegetables at a large discount or give them away for free.



Food sector

- Restaurants, event caterers, grocery stores, etc. can donate surplus food to food banks. Suppliers of freshly made products, such as bakeries, can sell leftover products at a discount shortly before closing.
- Restaurants and canteens should monitor the amount of food left on plates and serve smaller portions or generally offer two different portion sizes for all dishes.
- Use small plates at buffets.



Electrical devices

and appliances

BETTER RAW MATERIALS
FOR SUSTAINABLE PRODUCTS

We can no longer imagine a world without electrical devices. In 2016, nearly two million new electrical and electronic devices were sold in Germany – more than ever before. These devices contain a number of critical materials: not only valuable and often rare raw materials such as copper, aluminium, plastics, gold or neodymium but also chemicals that pose health or environmental risks, such as mercury, hydrofluorocarbons (HFCs) or brominated flame retardants (BFRs). This makes it all the more important to ensure that these devices are reused or disposed of without harming the environment.



Examples of projects and initiatives

Berlin: keeping old products in use

Re-Use Berlin is a project set up by the Senate Department for Urban Mobility, Transport, Climate Action and the Environment. Its aim is to actively promote the reuse of used goods in Germany's capital. A variety of measures have been implemented, for instance a website has been created where residents can find out where to take their used products. In addition, existing second-hand shops in Berlin have been merged under a single umbrella brand.

Improving repair centres

WIRD (Wiederverwendungs- und Reparaturzentren in Deutschland, reuse and repair centres in Germany) is a nationwide cooperation scheme between social and public institutions such as recycling centres, private/commercial manufacturers and the retail. The project was funded by the Federal Environment Agency and is intended to strengthen the capabilities of not-for-profit reuse and repair centres.

Blue Angel for durability and repairability

The Blue Angel ecolabel also addresses, for example, the longevity of rechargeable batteries and the ability to replace them (for example in mobile phones) or the availability of spare parts from manufacturers of household appliances.

What can I do as a consumer?

- If a device is defective, find out if it can be repaired before purchasing a new one.
- Check whether buying a second-hand or refurbished appliance could be an alternative to buying a new product.
- Buy electronic devices certified with the Blue Angel ecolabel.
- Donate products that are still usable to reuse centres, give them away or sell them.



What can I do as an economic operator?

Manufacturers

- Pay greater attention to product repairability during the design phase.
- Prioritise modular designs without glued rechargeable batteries.
- Provide customers with transparent information about durability, repairability and upgrade options.
- Do not use materials with potentially adverse impacts on the environment and human health.



Retail

- In the shop: give customers information about whether and how the product can be repaired, for example, and whether there is a manufacturer's warranty.



What can municipalities or educational institutions do?

- Support local reuse and repair centres.
- Promote regional networks, for example with the same quality standards.
- Encourage public waste management companies to set up reuse centres.



Batteries

USE BATTERIES FOR A LONG TIME
AND DISPOSE OF THEM PROPERLY

They power smartphones, laptops and electric cars and light up torches: batteries are an integral part of our everyday lives. However, the process of manufacturing batteries is detrimental to the environment and resource- and energy-intensive. Batteries contain valuable and often even critical raw materials such as cobalt, manganese, so-called rare earth elements, gold, silver, nickel, copper, aluminium, lithium, zinc and iron/steel. They also contain chemicals that are particularly hazardous for human health or the environment such as mercury, cadmium and lead. Standard-size, non-rechargeable batteries, also known as primary batteries, provide only a relatively small amount of energy and often do not completely discharge their energy content. As a result, they end up being thrown away after just a short period of use. Rechargeable batteries, on the other hand, can be recharged multiple times. Compared to primary batteries, rechargeable batteries are the greener solution after only a few charging cycles.



Examples of projects and initiatives

UBA: practical guide on the lifespan of batteries

How do I dispose of dead batteries? What happens to rechargeable batteries that don't work anymore? What are the environmental and health risks of standard and rechargeable batteries? How can I extend the lifespan of rechargeable batteries? These and other questions are answered by the Federal Environment Agency in a practical guide on standard and rechargeable batteries. The guide can be downloaded from the website of Federal Environment Agency free of charge.

(www.umweltbundesamt.de/sites/default/files/medien/publikation/long/4414.pdf) (only available in German)

What can I do as a consumer?



- Check whether battery-powered products also work with rechargeable batteries.
- Use rechargeable rather than standard batteries as they can be recharged many times, thereby saving raw materials.
- You can extend the life of rechargeable batteries by not continuously charging them, not overcharging them and ensuring that they never completely discharge. Rechargeable batteries should be charged when they are not yet fully discharged. In addition, they should be stored at temperatures between 10 and 25 degrees; lower or higher temperatures can shorten the lifespan of rechargeable batteries.

What can I do as an economic operator?



- Focus on rechargeable batteries that have a high number of charging cycles.
- Traction batteries from vehicles (electric and hybrid cars, electric buses) that have reached the end of their useful life are usually suitable for a second life, for instance as stationary energy storage devices for renewable energy. Simple measures can ensure that these batteries are reused and prolong their lifespan by 10 to 15 years.
- Batteries should be replaceable so that the products they power can be used for as long as possible.

Textiles

DURABLE, HAZARD-FREE
TEXTILES

Fashion is in style: The number of items of clothing produced around the world doubled between 2000 and 2014. In Germany, around 1.01 million tonnes of used textiles are collected for recycling every year. The manufacture of textile products is associated with severe environmental impacts. Textile finishing, for example, produces more wastewater than almost any other industrial sector.

In this context, “fast fashion” is particularly problematic, with up to 24 new collections every year. Short-lived fashion trends result in mass production of textiles which become waste after a short period of use. In addition, products are of increasingly lower quality, reducing their potential to be recycled or reused.

Examples of projects and initiatives



Improving sustainability in textile production

The Partnership for Sustainable Textiles has around 120 members from the private sector, politics, civil society, trade unions and standards organisations. The partnership focuses on the entire textile supply chain. The idea is that producing textiles sustainably will contribute in the long term to reducing the mass production of lower-quality products. This in turn will increase the lifespan of individual pieces of clothing.

Promoting good design

Product design is a major factor in the environmental impact of textiles. The German Ecodesign Award recognises manufacturers who attach importance to sustainable design for textiles, taking technical, aesthetic, environmental, social and economic aspects into account.

What can I do as a consumer?

- Wear clothes for as long as possible.
- Take a good look at your own choices: do I really need something new, do I have to follow every trend?
- Or: can I or a tailor/dressmaker alter my clothes or repair them so that I can keep wearing them?
- Look for credible textile labels when shopping for clothes. A portal created by the German government helps you navigate through the maze of labels.
www.siegelklarheit.de (only available in German)
- Rather than following fast fashion trends, buy new clothes less often and choose higher-quality items that you can wear for longer.
- Swap clothes with other people or sell them at car-boot sales, in second-hand shops or concerning online rather than throwing them away.



What can I do as an economic operator?

- Promote clothes for hire.
- Promote swap platforms.
- Set up an alteration service in your shop for mending and altering clothes.
- Promote circular economy and sustainable production within the Textiles Partnership: the Partnership for Sustainable Textiles is a multi-stakeholder initiative and therefore targets not only retail companies but also other groups such as institutions and the public sector.



What can municipalities do?

- Promote repair centres and alteration services.
- Support clothes-swapping events/centres, flea markets, etc.



Laundry detergents and

cleaning products

ENVIRONMENTALLY FRIENDLY
LAUNDRY AND CLEANING

Laundry detergents and cleaning products may contain substances such as surfactants that are toxic to aquatic organisms. Moreover, some of their constituents are not readily degradable and accumulate in water bodies and sediments, where substances such as phosphorus and salts then contribute to salinisation and eutrophication. Eutrophication is the gradual increase in the concentration of undesirable nutrients in a formerly nutrient-poor body of water. This enables algae and certain aquatic plants to thrive, thus depriving other plants, microscopic organisms and animals of the conditions they need to survive.

Examples of projects and initiatives



Sustainably clean

The Forum Waschen (laundry, washing and cleaning forum) is a dialogue platform that brings together government agencies, ministries, research institutes and manufacturers of laundry detergents and cleaning products. The Forum aims to raise awareness of sustainable approaches to laundry, washing up and cleaning. The initiative's website provides useful advice for consumers, such (www.forum-waschen.de) (*only available in German*), as tips for sustainable house cleaning.

Sharing household knowledge

The Berufsverband der Haushaltsführenden (DHB) is an umbrella organisation that undertakes to share household knowledge and skills and promote vocational education and training in this area. Its website provides many useful tips on all aspects of running a household, cooking, laundry, cleaning and harmful substances.

What can I do as a consumer?



- Use washable cloths for cleaning and dishwashing rather than paper towels or disposable dishcloths.
- Use the right dosage; carefully read the instructions, and if necessary go online or contact relevant associations for advice.
- If possible, do not use chemical cleaning products; in many cases, substances such as vinegar, lemon juice or other natural products are sufficient for cleaning.
- Look for products with the Blue Angel label or the EU Ecolabel.
- Do not buy products with hazard pictogram labels.
- Do not buy products containing microplastics, such as tooth-pastes, shampoos and cosmetics. A practical guide to avoiding microplastics when shopping can be downloaded from the BUND (Friends of the Earth Germany) website at: www.bund.net/fileadmin/user_upload_bund/publikationen/meere/meere_mikroplastik_einkaufsfuehrer_alt.pdf (only available in German)
- Further information on pollutants can be found on the Euskirchen district DHB leaflet: www.kreis-euskirchen.de/umwelt/downloads/abfall/Flyer_Schadstoffe.pdf (only available in German)

What can I do as an economic operator?

Manufacturers

- When launching new products, make sure that they only contain substances that are essential for the actual washing or cleaning process (no scented microbeads, laundry scents, etc.).



Retail

- Display a list of products with the Blue Angel label/EU Ecolabel and provide information on labels and product contents.
- Provide refillable containers for liquid detergents, soaps, and cleaning products.



Building materials



The construction sector is one of the most resource-intensive sectors of the German economy, with demand for material continuing to increase. Furthermore, the construction and demolition of buildings generates large amounts of waste. According to nationwide waste statistics in Germany, this amounted to 220.3 million tonnes in 2017 – more than 50 percent of the total amount of waste in the same year. One particular challenge is that because the lifespan of buildings is so long, harmful substances used in their construction and are later banned do not become waste until decades later.



Examples of projects and initiatives

Reusing components recycled from construction sites

The aim of Bauteilbörse Bremen (Bremen building components exchange) is to act as a marketplace for usable building materials that have been obtained from demolitions or renovation projects. It targets private individuals, skilled trade enterprises, demolition companies, construction companies, planning offices and municipalities. Other advantages: users save the costs of disposal and can get hold of hard-to-find building materials on the marketplace.

The building passport shows what's inside

In order to meet the growing demand for building materials while simultaneously saving resources, recovering raw materials is becoming ever more important. However, it is often difficult to determine exactly what materials have been used to construct a building. The building passport solves this problem. It documents all materials used in construction and any subsequent structural changes, so that the original raw materials can be recovered wherever possible. Another goal is to optimise maintenance and building conversion. These building passports are already in use for publicly owned buildings, but only rarely for privately owned buildings used for commercial purposes.

What can I do as a consumer?

- When building a house, choose construction methods with recycling in mind and use building materials that are as environmentally friendly as possible.
- Ask the construction company in charge for documentation on the materials and construction elements used (building passport).
- When building or renovating a house, ask the architect or construction company to specifically look into using recycled materials such as doors and windows.



What can I do as an economic operator?

Recommendations for construction companies:

- Use recycled building materials rather than primary materials.
- Use building materials, paints and varnishes certified with the Blue Angel ecolabel.
- Choose recycling-friendly construction methods and materials.
- Minimise the use of harmful substances in buildings.
- Document materials used in building construction.
- Use (waste) building material and building component marketplaces.
- Keep construction site waste containing harmful substances separate from other waste.
- Separate collection of building waste by material on the building site.

Recommendations for demolition companies:

- Selective dismantling of buildings containing harmful substances.

Recommendations for manufacturers of building materials and products:

- Use waste from construction/demolition sites and/or recycled building materials in production.
- Provide treatment data leaflets, identify materials and any harmful substances.
- Offer recycle/return systems (for example Rewindo, for windows).



Where can I find further

information about waste prevention?

More detailed information on waste prevention is available from the German government's waste prevention programmes with the involvement of the Länder, online on the websites of the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (BMUV) and the Federal Environment Agency as well as on the BMUV's social media channels.

www.bmu.de/en/topics/circular-economy/circular-economy-overview

www.umweltbundesamt.de/en/topics/waste-resources/waste-management/waste-prevention

We would like to invite you to participate in the annual European Week for Waste Reduction (EWWR) with an activity of your own. The many waste collection events organised by the Let's Clean up Europe campaign also offer plenty of opportunities to become active yourself.

www.letscleanupeurope.de *(only available in German)*

Waste prevention is gaining more and more attention as an issue around the world. It offers opportunities for you to get involved and play an important and active role in protecting the environment, as well as creating new opportunities for the German market. Get informed!

List of abbreviations

AG	stock company (Aktiengesellschaft)
BMEL	Federal Ministry of Food and Agriculture (Bundesministerium für Ernährung und Landwirtschaft)
BMI	Federal Ministry of the Interior and Community (Bundesministerium des Innern und für Heimat)
BMUV	Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (Bundesministerium für Umwelt, Naturschutz, nukleare Sicherheit und Verbraucherschutz)
BUND	German Society for Nature Conservation (Bund für Umwelt und Naturschutz Deutschland e. V.)
bvse	Federal association for secondary raw materials and waste disposal (Bundesverband Sekundärrohstoffe und Entsorgung)
CAU	Kiel University (Christian-Albrechts-Universität zu Kiel)
CFCs	Chlorofluorocarbons
CO ₂	Carbon dioxide
CsgG	Carsharing Act
DHB	Association of German housewives (Deutscher Hausfrauen-Bund)
DIN	standards organisation (Deutsches Institut für Normung e.V.)
EBE	waste management company (Entsorgungsbetriebe Essen)
EFA	Effizienz-Agentur NRW (the agency responsible for energy efficiency in the state of North Rhine Westphalia)
EFRE	European Regional Development Fund (Europäischer Fonds für regionale Entwicklung)
EU	European Union
e.V.	registered association (eingetragener Verein)
EWWR	European Week for Waste Reduction
GftZ	Future of Textiles Association (Gemeinschaft für textile Zukunft)
GmbH	limited liability company (Gesellschaft mit beschränkter Haftung)
GVM	packaging market research company (Gesellschaft für Verpackungsmarktforschung mbH)

IHK	German Chambers of Industry and Commerce (Industrie- und Handelskammer)
IKW	German Cosmetic, Toiletry, Perfumery and Detergent Association (Industrieverband Körperpflege und Waschmittel)
LAS	Linear alkylbenzene sulfonates
NRW	North Rhine-Westphalia (Nordrhein-Westfalen)
SMEs	Small and medium-sized enterprises
UBA	Federal Environment Agency (Umweltbundesamt)
UN	United Nations
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
VDI ZRE	VDI Centre for Resource Efficiency (VDI Zentrum Ressourceneffizienz GmbH)

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