Sustainable living in Europe

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Comparison of the situation in Europe and answers to some everyday questions

Participating Countries:
Germany, Belgium, Austria, Bulgaria, Spain

With the project partner organizations:

Lernwerkstatt Europa e.V

Greendation e.V.

Sambucusforum vzw

Systeme in Bewegung e.V.

Junta de Castilla y León
Consejería de Educación
Escuela Oficial de Idiomas
Segovia

AKADEMIE für Politische Bildung und demokratiefördernde Maßnahmen

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Foreword

Sustainability means meeting our needs without endangering people, the environment or the economy now or in the future. Resources are used sparingly and considerately. And that is quite a challenge, because the western world is still living large.

As part of the Erasmus+ project "Sustainable Living in Europe", institutions from DE, AT, BE, ES and BG have joined forces to find out what approaches are being taken in Europe to make their own lives more sustainable and thus counter the global environmental crisis.

Where we started

As a first step, we exchanged views on how the situation is in the individual countries and what we ourselves, personally and with our institutions, are already doing to live in a more environmentally sustainable way. We have gathered the following:

1. Nutrition:

A partner from Belgium writes about her experiences:

"Socially responsible living, attention to the environment and climate, reuse of raw materials, economical use of energy. This is what we have been trying to achieve since the 1970s.

For about 30 years we had a certified organic farm with vegetables, fruits, grains, animals, where we provided for ourselves and our 6 children.

We raised our own products and also sold them, we processed the milk of the cows and goats into butter, curd, yoghurt, buttermilk, cheese. We processed our fruit into wine, compote, dried fruit and fruit juices. We baked our own bread, also sourdough, we made our own biscuits and cakes. We also had a small network of like-minded organic or eco-entrepreneurs, bakers, butchers, greengrocers, fruit growers, and we regularly organised markets."

Interestingly, a staff member of the Austrian organisation has something very similar to report:

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"The change in thinking started 16 years ago when our son was born. Since then, we have done without convenience food and consume almost 100 % home-cooked food. Of course, there are exceptions, like on holiday or when children want fast food, but you shouldn't put the cloak of evil over it and make it more desirable.

So as far as cooking is concerned, we have switched to organic and also to regional products.

With the death of my grandparents, who had a farm, a time began for me and my siblings that challenges us especially in late summer and autumn. We now process huge amounts of fruit - boil it down, preserve it and don't buy any fruit during this time - especially not fruit that doesn't come from Austria. We consciously do without bananas and the like during this time."

The employees of the other partner organisations have also tried to make their diet more sustainable. For example, participants from DE, BE and AT have significantly reduced their meat consumption, while in ES and BG the focus is on avoiding food waste. They all try to buy food regionally and in organic quality as much as possible.

2. Waste prevention/ Recycling:

All partners in the project try to avoid packaging waste as much as possible, but in different ways. The following ideas are implemented:

I prefer to wrap a book or a present in old newspaper rather than in a plastic cover. (BE)

- I use reusable bread, vegetable and fruit bags. (BE, ES)
- I keep paper that is only printed on one side in a separate drawer and use the back for notes and often for printing. (BE)
- If necessary, I take storage tins with me to the restaurant to pick up food (DE)
- Try to make cosmetics, cleaning products etc. yourself: e.g. make bath drops (DE)
- Buy refills (e.g. for shower gel) (DE)
- Upcycling things (DE)
- Zero Waste is a big topic since we are involved in the Zero Waste Cuisine for Sustainable Future project - see: https://www.facebook.com/Zero-Waste-cuisine-107691180778324 (AT)

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All those involved try to recycle the rubbish that cannot be avoided, but it is not always that easy: "We do not dispose of the rubbish separately, mainly because there are no appropriate collection containers in our neighbourhood. And if we do, we always wonder why the separately collected rubbish is taken away by a common truck that also empties normal rubbish containers." (BG)

To further reduce waste, some project participants go even further: "I take old things to the second-hand shop or give them away or exchange them, I regularly buy used things and always try to recycle things and buy decent, responsible clothes and tools," reports a partner from BE. A German partner organisation does it similarly: "We purchase timeless, high-quality and long-lasting clothes, basically consume less or consciously, buy used things or repair rather than buy new.“

3. Transport

All participants try to avoid car journeys as much as possible and use public transport or cycling or walking instead. Two participants just faced the decision to buy a new car. The partner from BG writes: "We are planning to buy a new car and are carefully analysing which type causes the least air pollution." The German partners were able to take advantage of a government grant to invest in an electric car and a photovoltaic system.

Everyone also avoids air travel as much as possible, sometimes even choosing closer holiday destinations to avoid flying in favour of travelling by car or train. BG reports that this renunciation was greatly facilitated during the Corona crisis. In this context, everyone is looking forward to the new possibilities within the framework of "green Erasmus".

4. Energy

The topic of electricity was a particular focus in BG, BE and ES. For example, the participants from Spain have just changed all the lights to LED, and from BG it is reported: "We are trying to use less electricity by monitoring energy consumption. We apply the concept of the smart home, which is both entertaining and economical. For example, the lights in the hallway, which we often forget to turn off, are automatically turned off after 30 minutes. As soon as we leave the house, all unnecessary appliances (lamps, TVs) turn off automatically." (BG)

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Staff of the partner organisation from DE take care not to use lifts if possible and the Belgian partner writes: "I choose green energy and invest in renewable energy (wind, solar, water,...) by installing solar panels on the newly built flats in my immediate neighbourhood - these flats will be well insulated and get heat from deep pumps. There will also be a very large water reservoir to collect rainwater that will be used for flushing toilets."

5. Within the institutions

We have also collected what is already being done for climate protection in the individual partner organisations. Here is an overview:

- Paperless office, association communication as digital as possible (DE)
- We travel to meetings by train if possible and try to avoid flights (AT)
- We bought our mobile phones from refurbed (AT)
- We regularly refer to the topic of ecological sustainability on our facebook site (AT)
- Less photocopies from teachers / more online work = less paper consumption (ES)
- Raising awareness / sensitisation of students and teachers at school (ES)
- Sustainable office materials: eco-printers, eco-paper, eco-toilet paper (DE)
- Paper folders instead of plastic folders (BG)
- Use of glass or ceramic cups instead of plastic cups, use of paper packaging (BG)
- Natural soap instead of liquid in plastic packaging (BG)
- Use of tap water instead of mineral water in plastic packaging (BG)
- Use of cloth bags and backpacks when shopping and carrying documents (BG)
- Collection of plastic lids (Green charity campaign to collect all kinds of plastic lids. The money raised from recycling is used to buy consumables for family shelters for children without parental care in the country, as well as medical equipment and incubators). (BG)

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6. Particularities

When collecting the answers from the partner countries, we were pleased to see how much is already being done and what details the employees sometimes pay attention to. For example, the German partners buy their Christmas tree in a pot, and the Bulgarian partner describes how composting and natural soil improvement have a positive effect compared to the use of chemicals in the cultivation of crops.

Another exciting feature was found in two project partners from AT and BE, who both have qualifications in herbalism: "Over time, my interest in herbs and plants to support healing processes increased, so I trained as a herbalist. Since then, we have been collecting and drying herbs, preparing tinctures, making creams and bath salts, and much more," writes the Austrian partner. And the Belgian partner reports: "I can easily make my own natural dyes, care products and cleaning products because I have done a three-year training as a herbalist. So for me, nothing has changed and things continue as they have since the 70s. I'm very happy that the efforts from so long ago were the right ones and that the world needs to move in this direction more than ever."

Conclusion

All staff members in the project are aware of the challenges and tasks we have to take on for more climate protection. There is agreement on many things, e.g. avoiding waste and air travel. In some places, different ways have to be found to get there, e.g. when recycling or deposit systems are not yet sufficiently established or transparent in some countries. In order to save energy and water, to move around in a more environmentally friendly way and to make one's own institution more environmentally friendly, many similar ways and some individual aspects have been found. For the project partners from the senior citizens' association from BE, they have even come full circle: in the context of the current development towards more climate protection, old values and procedures that they have been observing and applying since the seventies are becoming relevant again.

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Our questions

In the second step, the consortium collected questions that employees and learners from the organisations' environment ask about climate and environmental protection. These questions should be very everyday and practice-oriented in order to provide real support for all people who want to deal with the topic. From the 30 questions collected, each organisation has chosen two to three below and answered them.

1. Is an electric car really more environmentally friendly than a conventional combustion engine when production and disposal are also taken into account?

How environmentally friendly an electric car is depends on two factors: the CO2 emissions released into the atmosphere during its manufacture and the sources used to power it.

1. The biggest source of pollution in electric cars is their batteries. Lithium batteries for electric vehicles contain rare earth materials such as lithium, cobalt, graphite and nickel. The Deutsche Bank estimates that current lithium reserves will last for the next 185 years, even if consumption triples. Despite the ever-advancing technology, the production of an electric car battery releases 17 tonnes of CO2 into the atmosphere. By comparison, the same air pollution occurs when a diesel car is used for 200,000 kilometres. In this case, an electric car pollutes the atmosphere in the same way as a standard diesel car, even before it leaves the factory.

2. Electricity is consumed when charging the electric car. The source of energy is important. If it is coal, its use continues to pollute the climate. However, if it is renewable sources, electric cars are truly environmentally friendly when used.

It is important to note that despite the fact that the production of an electric car is much more polluting than that of an internal combustion vehicle, however, no emissions are released into cities, which increases the quality of life. Lithium battery factories are often located far from populated areas. Due to the relatively simple construction of electric cars and because no high-power components are integrated, the operating time is much longer than for a diesel car. For example, in 2019, a Tesla electric car reached 1 million kilometres of mileage for the first time without changing batteries.

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Recycling lithium batteries releases much less carbon emissions than manufacturing them. Unfortunately, due to the relatively new technology, there are not yet enough electric cars that can be recycled. Volkswagen has completed a factory that can recycle 95% of the valuable materials in lithium batteries.

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2. Is sustainable packaging made from renewable raw materials also ethically justifiable, taking into account that food is produced for its manufacture while many people suffer from hunger? Consideration of social sustainability.

Due to the ever-increasing world population, consumption has increased drastically in the last decades. In addition, our consumer goods are coming onto the market in a wide variety of plastic packaging to make our lives easier down to the smallest detail. But not only is plastic increasingly littering our planet, namely it ends up in the form of microplastics in the oceans and at the end of the food chain in our bodies, but it also contributes enormously to global warming and is becoming a danger to the planet and humanity. How much longer can our planet endure this situation?

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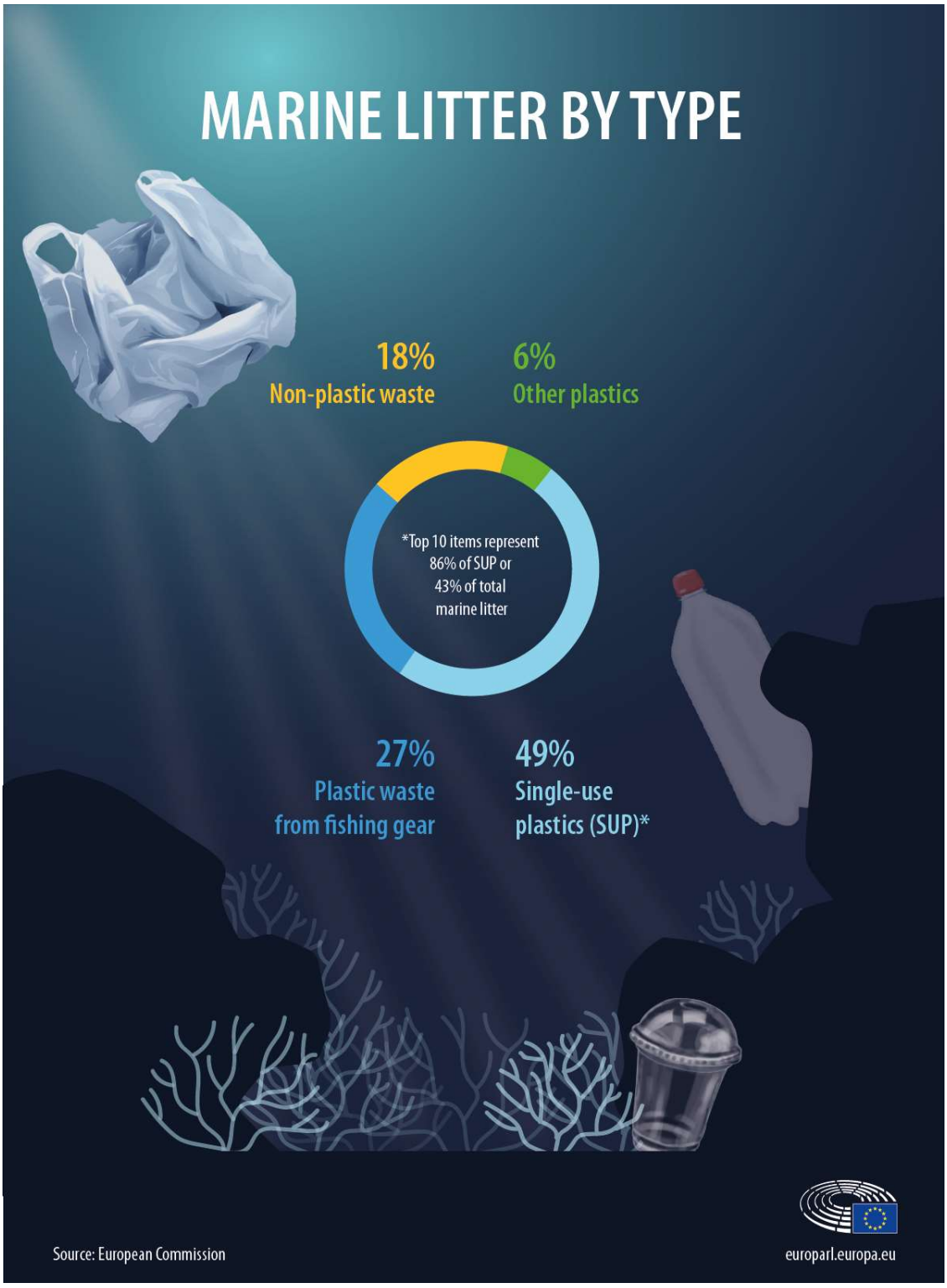

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Plastic is made from oil, a raw material that is finite and mostly comes from politically unstable countries. In order to become independent of this and to solve the problem of the waste heap and microplastics, the EU has set itself the goal that all plastic packaging in the EU must be recyclable by the year 2030. Therefore, new alternatives to plastic have developed that should pave the way to a circular economy. These include the so-called bioplastics.Doch „Bio“ ist nicht immer gleich „Bio“.

One must distinguish "bio-based plastics", whose origin is to be found in renewable raw materials, from "biodegradable plastics". "Biobased" does not automatically mean "biodegradable" and again, "biodegradable" does not necessarily mean that these raw materials come from renewable resources, because they can also come from petroleum and be biodegradable.

Bioplastics have developed rapidly in recent years. So far, 4 generations of bioplastics can be distinguished. In the first phases, bioplastics were produced from potato and corn starch. Then renewable, non-edible raw materials such as wood or residues (fruit pits, coffee grounds, harvest residues, etc.) and non-cultivable raw materials (algae, bacteria, etc.) were used.

Although bio-based plastics conserve petroleum resources and generally reduce carbon dioxide emissions and the amount of plastic in the oceans, the impact of cultivating renewable raw materials for the production of bioplastics on agriculture can be enormous. Among other things, the increasingly intensive use of arable land in agriculture or the use of soil fertilisers, pesticides, genetic engineering or the increasing consumption of water, for example, put a strain on our environment.

In addition, the degradation of bioplastics on one' s own compost heap at home is not guaranteed and in the recycling plants they cannot decompose properly together with the residual waste, because they need much more time and higher temperatures for degradation (12 weeks and at about 65 degrees). As a result, bioplastics end up as residual items in compost waste and are eventually considered unwanted by the recycling centre and incinerated.

In order to avoid these negative effects, we should focus much more on sustainable production and a regional circular economy. Plastics are recyclable materials and should therefore be used sensibly.

But for proper recycling, consumers would need more precise and clearer indications and sufficient information about the recyclability of packaging. This would reduce their confusion and uncertainty in dealing with plastics. It is not enough for consumers to pay more for

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bioplastics and feel that they have done something good for the environment. This can lead to making the plastic pile bigger in the process. It would be much better to go for reusable plastic and avoid plastic in general.

We could also discuss at length whether bioplastics are ethically justifiable at all when one in eleven people on earth suffers from hunger. Worldwide, one third of all food is lost or thrown away. The environment also suffers from the enormous amount of wasted food. Almost one tenth of all greenhouse gas emissions are due to discarded food. Despite this, the reduction of food waste has not yet appeared in the national climate protection goals of the Paris Climate Agreement. This could perhaps be a first step that could lead to a fair distribution of the world's resources and thus to a better world.

3. Why is separately collected waste disposed of together in the same truck in some countries? How transparent are the systems? How far can this be tracked?

In Bulgaria, the way waste is collected from separate waste collection containers depends on the company that transports it. For example, some companies use the same truck but collect a different container every day (one day only paper, the next day only glass). Others prefer to collect the containers in a common truck and then sort them at the recycling plant, which makes separate disposal somewhat pointless.

The bigger problem is the lack of containers for separate collection. They are not available where usual bins are located. Many people who want to dispose separately have to walk long distances to the place where bins for separate collection are located. The placement of such containers is the responsibility of the municipalities.

For example, one set of 3 bins - for paper, glass and plastic - serves 1000 inhabitants of Pleven. Another is problem vandalism to these bins, as in Bulgaria they are made of plastic and therefore not very sustainable in operation and burning. A very important problem is the reluctance of people to change themselves and their habits. There are constant excuses like, "There are no coloured bins near my house!", "I don't have space for three baskets at home!" Or, "I can't change the habits I've been used to all my life!" Thus, a change in people's thinking and an awareness of their own responsibility to live sustainably must be the first steps.

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4. How can we avoid planned obsolescence? Why do products now last half as much as they lasted in our grandparents’ time? What should we do to reverse this tendency? Are there any initiatives already in progress?

Planned obsolesce dates back to 1924 when a few light-bulb manufacturers agreed to start making light bulbs which would last less that the actual ones. Also, in 1932, due to the economic crisis in the USA, some economists thought it was a good idea to “limit the life of products and make repairs impossible in order to maintain limitless economic growth”.

In the past, companies aimed at making high quality products that would last for a long time, but in the last years, they have change strategy to be more profitable, and build with poor quality components and in such a way that products cannot be taken apart in order to repair them. When you try to separate the different parts, they break. Also, companies don’t make replacements for their products or they stop making them after a certain number of years.

Another point is the marketing strategy, always enticing consumers to buy the latest model or fashion, be it clothes or phones. Smartphones and computers are the devices that have a shorter life, not only because people may want the latest model, but also because new software is not compatible with an old model.

Possible solutions:

- Buy second hand. In this way we give a new life to products and reduce the amount of waste.
- Extend the useful life of goods as much as possible, and when you cannot repair them, take them to the recycling tip or send them to companies that specialize in recycling parts to manufacture new products.
- The European Parliament is proposing and promoting regulations to make it compulsory for companies to build things so that they can be repaired and to offer replacements for ten years at least, and to show it with a label. But until now, this is a “voluntary label”.
- We need a legislation that guarantees: “a right to repair, upgrade and recycle”. People should actively ask their governments for it. As consumers, we should ask about the product life and repairability and penalize companies which don’t follow these rules.

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- In France, they already have a law which makes planned obsolescence a punishable offence, but it can be difficult to prove.
- In Spain, as from January 2022, it will be compulsory for companies to offer a 3-year-warranty for their products, and for 10 years minimum they will have to offer replacements for repairs. This change into Consumer’s Rights Legislation has just been announced.

5. What is the Ecological Footprint made up of?

The concept of the ecological footprint has existed for over 15 years and was introduced at the Canadian University of British Colombia by Mathis Wackernagel.

The ecological footprint (also called the global footprint) is the space we occupy per person on Earth. How much space your footprint takes up depends on your lifestyle. What you eat, what you drink, what you wear, how you travel, in fact everything you consume contributes to the size of your footprint. Because it all takes up space, because it has to be grown, produced and transported, because trees are felled for it and because it emits CO2.

It is clear that Western (rich) countries have the largest footprint. Developing countries do much better in this respect, although they often have to suffer the heaviest blows when it comes to the consequences of our large footprint.

The average footprint of a European Union citizen is 4.8 hectares. The top performer in the European Union is Finland with an average footprint of 7.6 hectares and at the bottom of the list is Latvia with an average footprint of 2.6 hectares.

If all people lived with the footprint calculated for the average European, we would need 4.8 Earths.

For comparison with other continents:

- Africa 1.1 hectare
- Asia 1.3 hectares
- South and Central America 2.0 hectares
- Europe 4.8 hectares
- Australia and New Zealand 6.5 hectaresNordamerika 9,4 Hektar

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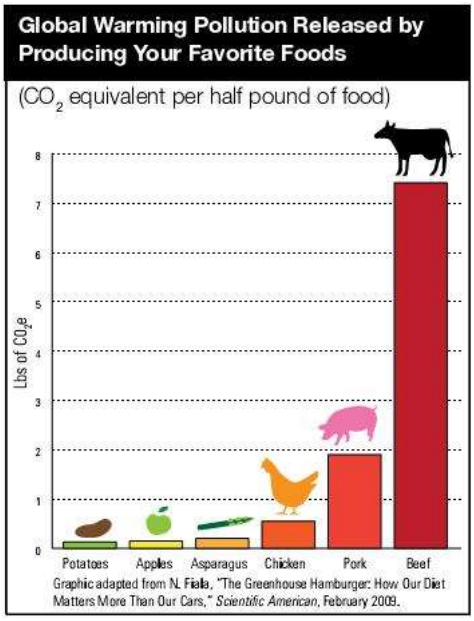
An example for what food production costs our planet:



How can I reduce my ecological footprint?

<u>Food</u>

- Eat local and seasonal products (so no more strawberries in winter).
- Don't eat too much meat, especially beef
- Choose fish from sustainable fisheries
- Use reusable shopping bags and avoid products with plastic packaging
- Buy only what you need. This way you avoid wasting money.

<u>Clothes</u>

- Take care of your clothes
- Try to swap, borrow, rent or buy second hand
- Buy responsibly made clothes, e.g. clothes made from recycled materials or with an eco-label

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Transport

- Use your bike or public transport
- Choose consciously when and how you use your car
- Try to take the train on your next holiday

Energy and Waste

- Turn the heating down by one degree. That makes a big difference.
- Take a short shower
- Turn off the tap while you brush your teeth or wash the dishes
- Don't leave electronic devices plugged in and unplug your phone when the battery is full
- Don't store data unnecessarily in the cloud
- Choose energy-efficient products with an A-label (EU energy label)
- Reduce and reuse waste.
- Also use the internet and messenger consciously: every mail, every message and every picture sent causes CO2!

On these websites, people from the partner countries can calculate their ecological footprint:

https://www.fussabdruck.de/

https://www.mein-fussabdruck.at/

http://esferaviva.com/calcula-tu-huella-ecologica/

https://bg.kyaaml.org/what-is-ecological-footprint-4580244-16491

http://mijnecologischevoetafdruk.be/

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6. What does Sustainability mean?

Sustainability is a broad concept, but in short it means that in a sustainable world, people, planet and profit are in balance so that we do not exhaust the earth.

The World Commission on Environment and Development defines sustainability as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". In short, using the Earth in a way that future generations can also enjoy. With sustainability, the Earth can also sustain the sum of our consumption in the longer term.

People, Planet, Profit (or the 3 P's) was invented by John Elkington, a consultant in the field of sustainable development. These must be in balance to achieve sustainability.

For the World Summit on Sustainable Development in Johannesburg (2002), the "P" was changed from "Profit" to "Prosperity" to include social gains as well as economic ones.

Threats for now and the future include:

- Climate change as a result of greenhouse gas emissions.

- Waste of raw materials and fresh water.

- Waste and pollutants entering the environment.

- Excessive use of pesticides.

- Air pollution

- Dehydration and acidification of the soil.

- Exploitation and human rights violations

What are the most common reasons why families want to live more sustainably?

By taking steps towards greener living, families can significantly reduce their own CO2 emissions. And that is necessary to stop the greenhouse effect. Moreover, by making a conscious decision, they show companies what they consider important as consumers. And the more people do this, the bigger the difference we can make together.

Sustainability protects our natural environment as well as ecological and human health.

Tips for a more sustainable lifestyle:

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- Pay attention to what you buy

- Eat vegetarian or vegan food more often

- Avoid food waste

- Don't fly or fly less and offset your flights through FlyGRN (This search engine compares tens of thousands of airline tickets to different destinations from different partners. When you book a ticket, FlyGRN receives a fee from these partners. They invest this fee in (partially) offsetting the CO2 emissions of your flight. So you don't pay extra for it. The higher the fee they receive from their partners, the more CO2 emissions they can offset).

- Choose sustainable forms of travel

- Buy second-hand and choose durable clothes

- Use energy and water sparingly

- Switch to a sustainable bank and insurance

How can children be inspired to strive for a sustainable world?

- cooking with the children, baking biscuits and bread

- Giving away and planting vegetable and flower seeds

- A small garden for the children

- Visit a farm or a fruit and vegetable grower. This way your children can see where their food comes from.

- Do you still have old fruit in your fruit bowl? Make ice cream from old fruit with your children.

- Try to put less meat on the table. This way your children will learn that meat doesn't have to be a standard part of a meal and they will learn about more sustainable options.

- Reduce the purchase of plastic packaging. Look for cardboard packaging in the supermarket with your children and make crafts with it (see e.g. on https://www.citymom.nl/newsmom/speelgoed-karton/).

- Have healthy snacks for school, e.g. for a birthday (see https://www.citymom.nl/newsmom/7x-gezond-duurzaam-trakteren/)

- play games with the theme of sustainability (z. B. auf https://www.sustainablelearning.com/)

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7. Would it be possible to produce sustainable products more cheaply??

The income situation of organic farms in Germany in 2019/2020 was on average about 33% better than that of their conventional colleagues. According to the Federation of the Organic Food Industry, 8,000 farmers in Germany have converted to organic farming in the last five years (almost 120,000 football pitches of land) - in total there are now over 35,000 organic farms in Germany, one in eight. Nevertheless, dumping prices for organic products in supermarkets are causing problems for farmers. Many such products are imported. Others are so cheap because retailers dictate the price. The sole aim of food retailers and the food industry is to maximise profits (Willi Kremer-Schillings, author and farmer). However, these profits do not flow into the pockets of the farmers, whether conventional or organic, but into those of the supermarket chains or the processing companies (Oetker, Nestle...). The fair thing is to make sure you buy regionally and seasonally, preferably directly from the farm. However, this is only sustainable if you don't drive your petrol car to get small things from the farm shop.

EU agricultural policy

According to NABU Germany, the current EU agricultural policy aggravates environmental problems in agriculture instead of solving them. Billions of taxpayers' money are being distributed inefficiently and in an environmentally damaging way. NABU and other environmental organisations call for the abolition of flat-rate area payments (on average 281€ per hectare of land / year) in order to reconcile nature and agriculture. The high proportion of direct payments, they say, leads farmers to increase their cultivated areas to the maximum, which strengthens the big ones, weakens the small ones and harms the environment. Example: While a farm with 50 hectares receives only about 14,000 euros in income support annually, a large farm of 5,000 hectares brings it to a whopping 1.4 million euros. Due to the flat-rate payment, there is hardly any incentive to produce in an environmentally friendly way. For most farmers, it makes sense to achieve the highest possible yields on their land. The result is an ever-increasing intensification of agriculture, in which important habitats are lost and insects have hardly any chance of survival.

In order to protect our groundwater in the future and to stop the extinction of species, the sustainable restructuring of agriculture would have to be promoted through investment aid and concrete nature conservation measures. Clear EU-wide environmental standards and

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sanctions for the European Commission are needed. Farmers need more incentives that make sustainable management financially attractive.

The existing nature conservation guidelines can be implemented financially by shifting the existing funds from flat-rate area premiums to attractive subsidies for concrete nature conservation measures. Overall, there should be a much more transparent, comprehensible subsidy practice.

The most sustainable way for consumers to eat is to eat no (or little) meat (especially beef) and to eat regional, seasonal and organic food.

Production of sustainable products

Sustainability in production refers to the burden on our planet that occurs when a product is produced. The manufacture of products by industry and commerce always involves the extraction of raw materials from nature and the use of land. Furthermore, pollutants are emitted into the soil, air and water during production. Sustainable production is about occupational safety, health and environmental protection. Behind these buzzwords are numerous processes, supply chains and measures that need to be changed or implemented. The aim of sustainable (eco-efficient) production is to make the manufacture of goods resource-efficient and to preserve the regenerative capacity of the environment.

Many companies see opportunities and advantages in sustainable product policies, such as competitive advantages over the competitors, adaptation to changing consumer behaviour, increasing attractiveness for skilled workers.

More and more people are buying sustainable products. Prices could fall if a number of factors interact: through improved material and energy efficiency, through more sustainable management and through large-scale production. In addition, more suppliers on the market could lead to greater competition. This requires continued educational work, so that more and more people become aware that we need to take responsibility for people and nature and consume sustainably.

8. Does it make sense to choose silicone over conventional baking paper or, for example, paper muffin tins?

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The production of silicone baking utensils does not require fossil raw materials, and silicone is a durable plastic, and thus friendlier to the environment. However, this also means that the material is difficult to biodegrade. If properly fed into the recycling loop, silicone products are readily recyclable. However, this is not yet common practice; in fact, only a very small proportion of silicone is actually recycled.

According to current knowledge, the silicone in the baking moulds is harmless to health, but there may be other harmful ingredients in them, which the moulds may emit, for example. Consumers should heat the silicone baking moulds for four hours at 200 degrees Celsius before using them for the first time and ventilate them vigorously to evaporate potential harmful substances. This approach is not very sustainable. There are doctors and scientists who point out the dangers of the hormone-like plasticisers that can be contained in silicone products. (mehr-grün.de).

The green suppliers of silicone baking utensils (e.g. greenpicks.de) strive for sustainability, act fairly, are climate-friendly and reduce pollutants, etc. The products of such suppliers contribute to sustainable, healthy living. Unfortunately, this approach is not evident in the low-cost suppliers. Neither can you read about a sustainable concept on the packaging or website, nor do their forms smell neutral..

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9. Packaging: How can we reduce packaging waste, especially for fresh produce such as salmon and vegan sausage etc.? Is plastic packaging acceptable if it makes the product last much longer? Are there degradable alternatives? How much longer can a cucumber, for example, be kept in plastic and what consequences does this have for the assessment of plastic packaging?

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Plastic owes its triumphal march in the packaging industry to polyethylene, which is derived from natural gas, and polypropylene, which is based on petroleum. And from the 70s onwards, life without plastic was unthinkable. Plastic therefore offered many advantages over conventional packaging materials, such as stability, lightness, sterility and flexibility. Plastic therefore seemed to be the be-all and end-all of future packaging materials. Entire households succumbed to this revolution and switched to plastic bowls, plastic containers and the like. Who doesn't know them, the numerous products of tupperware. In the last 70 years alone, more than 8 billion tons of plastic have been produced worldwide. Due to increased plastic production and the use of plastic in many areas such as outdoor clothing, toys and more, it has become apparent that this is a product that also poses many health risks to humanity. Plasticisers in toys, flame retardants in electrical appliances and other hazards associated with plastic products are suspected of causing diseases such as asthma, obesity, developmental disorders in embryos and infertility.

Reactions to this will be visible above all in trade and the fight against plastic as a packaging material will be declared. Plastic carrier bags will be history in Austria from 1 January 2020. Only remaining stocks may still be sold. At the EU level, there will be an end to single-use plastic products from 2021.

But what alternative packaging materials can be used instead of plastic?

For consumers, it is difficult to understand which packaging material is the better alternative in terms of its impact on health or CO2 emissions. After all, glass or paper are not necessarily more energy-friendly, especially during production, and evoke higher CO2 emissions than products packaged in lightweight plastic, especially during transport. But is it really necessary to pack everything in plastic? In order to avoid plastic as a packaging material, consumers need to rethink. On the one hand, we only produce what we buy, and on the other hand, consumers should reflect on whether it is really necessary, for example, to wrap each sugar individually in plastic and pack it in a plastic bag. In this context, the question arises whether the packaging is more appealing to the consumer than the product. In order to escape this packaging madness, consumers currently have more options at their disposal. Zero waste shops or unpackaged shops are opening their doors to people who consciously decide to reduce packaging material.

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Shopping then does not take place ad hoc, but requires some planning. Screw-top jars and bottles, cloth bags and boxes have to be brought along. This concept is not new, but it is in! Those who buy regionally and seasonally have most likely been using this method for a long time. Farm shops offer ideal conditions for this. Because a cucumber that is bought regionally and seasonally does not need plastic. Proper storage is the only way to ensure that they remain edible for a long time. The same applies to other fruit and vegetables. Brought home in cloth bags or wooden crates, properly stored and processed for immediate consumption or preserved, plastic as a packaging material is not a question of necessity. There are many alternatives, but they also require a reduced lifestyle and, above all, sufficient cooking skills. It is best to buy food in its most original form, such as cereals, fruit, vegetables, milk, meat or fish. These can either be stored well in jars, paper bags, wooden boxes, beeswax cloths or simply prepared fresh. Then there is no need for degradable alternatives made from vegetable oils or vegetable starch, and social-ethical issues are not even up for discussion.

Conclusion:

Overall, it can be assumed that plastic as a packaging material can be dispensed with in many cases. Fresh, regional and seasonal cooking is half the battle. Plastic packaging as glass containers with plastic lids, would probably only be used for a few products, such as freezing meat or fish. Whereas alternative packaging materials on a vegetable basis would then no longer be needed at all.

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10. Sustainability: Where do families most often start to become more sustainable in their daily lives? Saving energy at home? In the household? In the home? Nutrition? Wasting food? Sustainable shopping? Travel more sustainably?

With the emergence of the Greens in politics in the 70s the focus in politics was also placed on environmental issues. Grievances were pointed out, initiatives for nature conservation were founded. At that time, the so-called Greens tended to get their votes from the alternatives and drop-outs, those who decided to lead a life that was very reduced and determined in the sense of back to the roots. At present, this sustainable way of life is lived across all strata of the population and can be described as a form of lifestyle.

Especially families expecting offspring are then suddenly concerned with topics such as: cooking healthier, avoiding toxins, saving energy, etc. According to a survey conducted in Germany 2021, 51% of respondents said that they are well aware that they can influence a more sustainable life through their daily behavior. This result will not differ significantly in other countries.

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So where do families most often start to become more sustainable in their daily lives?

According to a survey on which measures are among the most popular measures of sustainable consumption, it was found that more than a third of respondents would still use regional and seasonal foods. Also, following websites, blogs, Facebook groups and the like on social media, it becomes visible that the topic of sustainable living is in huge demand and is not limited to grocery shopping alone. This content is presented on a very simple level, mostly in the form of tips. Especially in Facebook groups, many topics such as more sustainable consumption, cooking, cleaning and travelling are discussed. More and more people are following the zero-waste philosophy, on the one hand to conserve natural resources, but on the other hand also to put less strain on the household budget. In the area of hygiene and household cleaning, many people see a way to use fewer chemicals in their bodies and thus live healthier lives by doing without these products or by using natural raw materials they have concocted themselves. However, on various platforms, people also learn that living more sustainably involves more than simply using naturally grown raw materials. Living more sustainably also means looking at where these naturally grown raw materials are sourced. For example, Indian soap nuts in the wash cycle are very environmentally friendly, but the fact that they have travelled a long way and thus cause high CO2 emissions cannot be classified as living more sustainably. It is much better to use regional raw materials. In Europe, for example, chestnuts or soapwort are a good alternative to chemical detergents. They can be used to make hair shampoo, soap and detergent. As the saying goes - "There's a herb for everything"! Herbs, especially wild herbs, are becoming increasingly popular. The number of different courses such as cooking with wild herbs or herbs on the mountain pasture are often fully booked long before the course starts. People understand a more sustainable life as finding happiness with and in nature. Above all, treating the land and its inhabitants with respect is important for around 80 % of respondents, according to a survey on the topic of "sustainable travel". So is the protection of native plants and animals. Although the respondents were very environmentally conscious, only 16 % of them paid attention to environmentally friendly travel. Due to the Corona pandemic, tourist travel is severely restricted. Although travel routes are shorter because they are limited to one's own country, they are almost exclusively done by car. Travelling by bus or train is avoided for fear of catching the disease. How travel will be organized in the future therefore remains an unknown quantity. Nevertheless, it can be assumed that many families will rethink in this area as well. Some may decide to forego flights altogether or choose to travel by train. Switching to an electric car is an extremely controversial topic across families and will be with us in the media for a long time to come.

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For tips on how to live more sustainably as a family, see:

- https://www.bevegt.de/nachhaltiger-leben/
- https://www.wir-leben-nachhaltig.at/aktuell/detailansicht/nachhaltigkeit
- https://www.conserve-energy-future.com/15-ideas-for-sustainable-living.php
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Sarah Ahrens: Umfrage zu beliebten Maßnahmen eines nachhaltigen Konsums in Deutschland 2019. 29. Jänner 2020. Verfügbar unter: https://de.statista.com/statistik/daten/studie/895141/umfrage/beliebte-massnahmen-zum-nachhaltigen-konsum-in-deutschland/#statisticContainer. Zuletzt aufgerufen am 1. Mai 2021.

11. Organic products: How much can I trust organic labels? What exactly is it? Which control bodies are there and what do I have to pay attention to in order to recognize them?

Organic lables were designed to reduce the complexity behind the production of goods such as food and thus to give the consumer a better overview when making purchase decisions. Organic labels are based on (minimum) criteria that must be met in order for a good to be allowed to “bear” the corresponding label.Many are familiar with the state organic label that has existed since 2001. It stands for the criteria of the EC organic regulation. There are also labels that go beyond these defined standards and have developed further, own criteria, such as Demeter, Bioland, Naturland and Biopark Ökologischer Landbau (a selection of german labels). In addition, there are labels that do not meet these organic standards, but take selected aspects into account, such as Neuland (species-appropriate, environmentally

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friendly animal friendly, without genetic engineering, Fairtrade (does not also have to be organic), MSC and ÖkoTest. (See for one Overview: bund.net)

If there is no EU organic label or a German organic label on products, they are probably not really organic products. Labels such as “controlled cultivation” or “close to nature” also do not indicate organic food. There is no independent control here and these terms are not protected. The terms “organic” and “eco”, on the other hand, are protected and the requirements of the EC organic regulation must be met for labeling with them. An annual check is carried out if the German or EU label is used.

It quickly becomes apparent that there are now a large number of "organic" labels and that some manufacturers have even developed their own labels. Basically, it can initially be positively stated that the invetion of the labels has increased both consumer awareness and the fact that manufacturers and suppliers have to be more concerned with their manufacturing processes. A certain environmental communication therefore takes place through these labels on different levels. On the other hand, the actual goal of reducing complexity is negated by the large number of labels, because as a consumer I now have to deal with the labels themselves and, so to speak, "unfold" their complexity again in order to understand what they actually stand for. A quick internet search is usually sufficient for this. But what does it mean if the milk comes from a cow that does not have to be in the barn for at least 120 days a year for 6 hours? Is that enough for a cow? Is that appropriate to the species? At this point you either have to take the time to deal intensively with specialist literature from the field of knowledge or trust the experts who created the label.

The EC organic regulation prescribes among other things. “The renouncement of chemical-synthetic pesticides and fertilizers, animal-friendly husbandry with outdoor opportunities, a ban on genetic engineering and a low use of additives. In addition, 95 percent of the product ingredients must come from organic farms. Minimum standards in animal husbandry must also be observed: Daylight and access to an outside area, for example, are mandatory. The animals have more space than in conventional husbandary.“ (Source: https://www.bund.net/massentierhaltung/haltungskennzeichnung/bio-siegel/)

So what should we do with this information now? First of all, „a label“ is better than „no label“. We recommend, however, to deal with the most important labels (e.g. German organic labels, EU organic labels, Demeter, Naturland, Bioland) and to initially be skeptical about unknown labels and own labels. If you are interested, you can first take a photo of them and research them in a quiet hour. The ethical debate in relation to products with a potentially large ecological footprint (meat, exotic superfoods, etc.) cannot take our label off us. In our opinion, it must basically be about providing as many people as possible with as

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much high-quality organic food as possible. Organic food should be affordable for everyone. In general, there is nothing to be said against organic eggs from the discounter if they have the appropriate organic label.

12. How much water is polluted when washing hair with conventional shampoo and how long does it take to break down / clean / clarify the water? What alternatives are there to conventional shampoo and how useful are they?

The wastewater is clarified step by step: First, sand, other coarse particles and floating matter such as oil and grease are mechanically separated. This is followed by biological purification by bacteria in an aeration tank.

Mechanical (also called physical), biological and chemical processes are used to clean the unwanted components of the wastewater. Modern wastewater treatment plants are accordingly three-stage, with one type of process taking centre stage in each treatment stage. The first sewage treatment plant on the European mainland was put into operation in Frankfurt am Main in 1882.

In the primary clarifier, the water is retained for about two hours. In this large, rectangular or round basin, the fine suspended matter can settle to the bottom as sludge. This raw sludge is sucked off, thickened and conveyed to a digester.

Approximate composition of a shampoo

Hair and scalp are usually cleaned with aggressive washing substances and, instead of being cared for, sealed with cheap substitutes such as silicone or polyquaternium. The hidden imperfections lead to dehydration and thus increased sebum production. As a result, a greasy appearance develops more quickly and frequent hair washes become necessary, which in turn keep boosting the demand for chemical cleansing and care products.

Alternatives: no shampoo, is that possible?

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The trend towards washing without shampoo (= NoPoo) is therefore not surprising. The NoPoo method usually uses natural cleansing aids such as starch, lyes or saponins in the form of chestnuts, rye flour, lava clay, natural hair soaps or baking soda. However, methods without additives such as combing out the sebum alone (= only sebum) or washing with water alone (= only water) are also included.

Source: https://www.smarticular.net/ohne-shampoo-haare-waschen/

Zero Waste: washing hair sustainably

Since many conventional shampoos contain controversial ingredients such as silicones, surfactants and artificial fragrances, more and more people are turning to alternative care products and time-tested home remedies. Natural helpers such as healing clay, rye flour and baking soda are considered particularly popular and efficient.

A big advantage of alternative detergents is that they produce less waste and are cheaper. Moreover, they do not contain any questionable ingredients that are harmful to humans or the environment. However, both hair and scalp need some time to get used to it. The washing process is also unfamiliar, because there is of course no foam or fragrance as with conventional shampoos.

13. Organic products: How meaningful are organic cleaners? Are these products realy better for the environment or do they just come in recycled packaging? What does 96% biodegradable mean? What about the other 4%?

The question about the meaningfulness of organic cleaners is most interesting since the term of “organic” in this context is not protected. However, the EU Eco-Label and the Blue Angel serve here as binding statement.

Besides there are voluntary labels like „Sustainable Cleaning Initiative“ (A.I.S.E. or cleanright.eu), Eco-Cert, ECO Garantie and many more advertising promises. The products advertised or labeled with it are less damaging to the environment than conventional comparable products. Something different are the advertising promises for packaging - which we only rate subordinately here.

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“Chemicals in the water - At least a third of the chemicals that get into the wastewater through washing and cleaning are toxic, that means, poisonous, for organisms. This is especially true for surfactants that remove dirt. Fragrances, phosphates, fillers as well as antibacterial ingredients and preservatives are often difficult to break down and linger in water bodies for decades. As a result, standing waters can become too salty and flora and fauna die off. Biocides from disinfectant cleaners damage microorganisms in water. The EU regulation on cleaning agents demands that surfactants must be biodegradable. It regulates product labeling and the maximum phosphorus content. Together with other laws on waste water and chemicals, the use of eco-toxic and poorly degradable substances is reduced, but not prevented." A handful of cleaning agents (washing-up liquid, all-purpose / neutral cleaner, bathroom cleaner, scouring milk) are sufficient for the majority of cleaning processes.“ (NABU 2018: https://www.nabu.de/umwelt-und-ressourcen/oekologisch-leben/alltagsprodukte/10507.html)

These are available in supermarkets and drugstores as well as environmentally friendly versions that are 100% biodegradable. Most of them can also be made by yourself.

(https://www.smarticular.net/rezepte-fuer-allzweck-reiniger-putzen-ohne-chemische-keule/).

All jene sind anderen Produkten klar vorzuziehen, die etwa mit Aussagen wie einer Abbaubarkeit von (nur) sagenhaften 96% ("biologisch abbaubar nach OECD-Test) werben.

Regarding the legal requirement for the degradability of surfactants:

Often there are manufacturer specifications on detergents and cleaning agents, according to which the surfactants used there are designated as biodegradable because they “fully meet all legal requirements with regard to biodegradability”. The tests according to the EU directives 82/242 / EEC or 82/243 / EEC (or according to the tenside regulation for the German detergent and cleaning agent law) only provide that "anionic and non-ionic tensides with regard to their washing effect must be degraded to 80 % (primary biodegradability) or the complete biodegradability (mineralization) of surfactants in detergents within twenty-eight days is at least 60% ”. Cationic surfactants are not taken into account in the statutory test procedures.

The test procedures only examine the primary degradation. Any further degradation of the test substance, as described in the OECD tests, is not considered here. As for numerous other cleaning agents, there are no legally prescribed test regulations for cationic and amphoteric surfactants“

(https://de.wikipedia.org/wiki/Biologische_Abbaubarkeit)

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In addition to surfactants, cleaning agents can contain the following components that are difficult or impossible to break down (biologically and chemically) (https://utopia.de/ratgeber/die-schlimmsten-inhaltsstoffe-in-reinigungsmitteln/):

• Fragrances are complex compounds that are difficult to crack and therefore difficult to break down. Some fragrances, whether synthetic or natural, such as the popular limonene, can cause allergies or be toxic to aquatic organisms.

• Bleach & optical brighteners are also difficult to break down. In the case of bleaching agents, those based on chlorine are particularly difficult from an environmental point of view, since they damage aquatic organisms per se and toxic compounds or reactions are possible if they are broken down. Some substances used as optical brighteners can trigger allergies.

• Products with "antibacterial" properties (so-called hygiene cleaners or disinfectants) are ecotoxicologically highly questionable. Disinfectants often contain chlorine compounds, which can irritate the respiratory tract. In addition, ingredients such as triclosan are repeatedly associated with hormonal effects and cancer. Other ingredients such as isopropanol, formaldehyde, ammonium compounds or fragrances are also considered to be hazardous to health. There is also evidence that the widespread use of antibacterial agents can lead to resistance in microorganisms. And it uses chlorine, formaldehyde and other poisons.

• Preservatives are poorly biodegradable, toxic for aquatic organisms and partially accumulate in the environment. Some can also trigger allergies in people. The harmful formaldehyde can cause headaches, irritation of the mucous membranes, nausea, breathing problems as well as asthma and allergies and is considered to be carcinogenic. Corresponding products may contain a maximum concentration of 0.2 percent. A product with a concentration of 0.1 percent or more must bear the note “contains formaldehyde”.

• Microplastics and (liquid) plastic compounds can also be found in cleaning products (ceramic hob cleaners, etc.) and are difficult to break down or persist and can have hormonal effects on a wide variety of organisms.

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14. What problems does aluminium foil / aluminium cause? What alternatives are there? How is aluminium produced, how is it recycled?

Aluminium is extremely light, flexible, heat-resistant and conductive - and is therefore one of the most popular metals. Since it was first mined about 130 years ago, its consumption has been rising steadily. Germany is the world's leading consumer of aluminium, followed by the USA and Japan.

Recently, however, the metal has increasingly come into disrepute: It is suspected from various sides that aluminium can have a harmful effect on our health and possibly even promote cancer and Alzheimer's through deodorants containing aluminium. Aluminium can damage the nervous system and impair bone metabolism.

By nature, aluminium is not found freely in our earth layers, but is always part of a compound with other substances. The ore bauxite is relevant for aluminium mining. It consists of about 60 percent aluminium and is extracted from the ground in open-cast mining. Aluminium is currently mined mainly in Australia, China and Brazil, but also in Guinea, India and Jamaica. In many of these countries, virgin forest and rainforest have to be cleared in order to obtain the bauxite.

The waste product red mud consists of many toxic chemicals, contains lead and other heavy metals, for example, and cannot be further processed. The electrolysis process for converting aluminium hydroxide into aluminium is extremely energy-intensive.

Aluminium is not only used as a packaging material, but is also used in a wide variety of industries: In transport (e.g. car or aircraft construction), in the building sector (e.g. window frames), in durable consumer goods (e.g. kitchen appliances), in electricity production (e.g. high-voltage lines) and in mechanical engineering..

Printed aluminium products, such as aluminium cans or yoghurt lids, are also a problem. If the aluminium here is melted down for recycling, the imprints can release long-lasting organic toxins.

Aluminium foil is one of the greatest innovations that makes our lives easier. Foil is a sheet of aluminium rolled up and thinner than 0.2 millimetres, most commonly used for cooking.

However, this product is not biodegradable like plastic. This means that it can remain in the ground for many years without deforming. The discarded pieces are light and can be moved by wind or water if disposed of properly, and then end up in unsuitable places such as

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oceans, rivers, etc. Most household aluminium foil pieces are not recycled because they are too dirty. The alternative is to use reusable foil, which is more expensive but strong and can be used for hundreds of cooking processes.

Alternatives to aluminium foil:

- for transporting food:

Paper bags, sturdy plastic boxes (BPA-free!) or, even better, glass or stainless steel bread boxes (e.g. from ECO Brotbox**), reusable bread packaging (e.g. Bee's Wrap).

- for storing / freezing / covering food:

Fridge / freezer tins, empty glass jars, cheese bells, simply a plate or bowl of suitable size to cover.

- If you must use foil:

prefer to use cling film - although this is also harmful to the environment, it performs slightly better than aluminium foil according to Öko-Test.

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https://www.conserve-energy-future.com/is-aluminum-foil-recyclable.php

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https://utopia.de/galerien/alternativen-zu-aluminiumprodukten/#1

Closing words

We are happy to have found so many answers to everyday questions from European families regarding sustainability. It is our hope that we can help people this way to make their life a little more sustainable. Anyway, despite conscientious research, we cannot guarantee completeness or warranty for the collected content.

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