

Learning pack #1

Teaching materials for schools and educational institutions
For students aged 12 to 16 years old



Plastic waste and its environmental impact



Imprint

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Introduction

The global use of plastic is causing problems all over the world. On one hand, plastic has huge advantages to other materials in that it is light, robust, cheap and durable. Yet on the other, it brings with it many disadvantages for the environment.

A quick look around reveals the scope of the problem. From packaged tomatoes in supermarkets and plastic plates at snack bars to plastic water bottles – plastic dominates our everyday lives. The sheer amount of plastic and its durability are a fatal combination for the environment and people. Plastic bottles carelessly tossed aside, inadequate waste disposal systems and a lack of awareness regarding the consequences of plastic pollution all pose a huge global problem. How can we get rid of this mountain of plastic? Or better yet: How can we avoid producing it in the first place?

Deutsche Welle's "learning pack" enables youth and environmental groups and teachers to tackle this topic in depth with young people aged 12 to 16. The learning pack consists of four Modules. These include **worksheets** with explanatory **handouts**, **articles**, **picture cards** and a **poster**. All the materials, including films, can be found on the accompanying **DVD**.

Everything for the lessons is also available online for free download:
dw.com/learning-environment

Structure

To create an understanding of the problem, the **first Module** provides a basic introduction to the issue of plastic.

The **second Module** looks at the individual dimensions to the plastic problem, in which students and young people examine how they use plastic and the role it plays in their lives. Following this "reflective process," another question is raised: namely how we can avoid plastic on an individual level and what alternatives exist in our countries.

The **third Module** examines the structural dimension by looking at the limits placed on our own actions as well as what is necessary to change this. Positive examples from different countries are presented here.

The **fourth Module** deals with gathering ideas to prevent plastic waste and agreeing on concrete collective action in this regard.

The following table provides an overview of the individual Modules, including their duration, a short content description, the learning objectives and materials required.



Icon for handouts



Icon for worksheets

Module overview

Module 1 | Problem and background

Duration	Description of content	Learning objectives	Materials and implementation
30 minutes	<p>Introduction to the topic through picture cards that depict issues relating to plastic</p> <p>Each participant chooses a card, explains why they have done so and what they associate with that card</p>	Getting to know the topic and building basic knowledge in the group	<p>Picture cards depicting different plastic-related issues</p> <p>Handout 1</p>
35 minutes	<p>Introduction to the topic via film</p> <p>There are two animated info films to choose from</p>	Basic understanding of the plastic waste problem	<p>DVD, TV with DVD player or PC with internet access</p> <p>Film 1 “How harmful are plastic bags to the climate?” dw.com/p/2Y8b9</p> <p>or</p> <p>Film 2 “What happens to my empty plastic bottle?” dw.com/p/2phRV</p> <p>Handout 2</p> <p>Worksheet 2.1 or Worksheet 2.2</p>
40 minutes	<p>Supplementary: Group work using infographics</p> <p>Work group (WG) 1: Plastic production – Scope and production methods</p> <p>Work group (WG) 2: Plastic waste in nature and the oceans</p>	Deepening knowledge of further issues relating to the plastic problem in work groups (WG) and presenting that knowledge to the larger group	<p>Handout 3</p> <p>Worksheet 3.1 (for WG 1) Worksheet 3.2 (for WG 2)</p>

Module 2 | Individual plastic consumption

Duration	Description of content	Learning objectives	Materials and implementation
20 minutes	Personal use of plastic: Describing my daily routine and the role of plastic in it	Reflection I: How, when and where do I use plastic and how do I dispose of it?	Handout 4 Worksheet 4
20 minutes	Prevention/reduction of my own plastic consumption and that of my family/those in my environment	Reflection II: What can I do to reduce my plastic consumption? What can my family do?	Handout 5 Worksheet 5
20 minutes	Alternatives to plastic in our own country: Adding to the poster with own proposals	Reflection III: What else can we do in our country?	Poster "Living without plastic" Handout 6

Module 3 | Structural element

Duration	Description of content	Learning objectives	Materials and implementation
20 minutes	Engaging with DW reporter Tamsin Walker's plastic waste avoidance experiment	Recognizing the structural limits of individual conduct	<p>Article 1 "Plastic-free: liberty or slavery?" dw.com/p/1HYGH</p> <p>Handout 7</p> <p>Worksheet 7</p>
20 minutes	A controversial plastic ban: Engaging with Zimbabwe's styrofoam ban	Weighing up the pros and cons of voluntarily changed behavior on an individual and collective level versus state intervention	<p>Article 2 "Cleaning up Zimbabwe with a styrofoam ban" dw.com/p/2I7FM</p> <p>Handout 8</p> <p>Worksheet 8</p>
20 minutes	Analyzing different recycling methods and the use of plastic as a recyclable material	Learning about various recycling methods and alternatives	<p>DVD, TV with DVD player or PC with internet access</p> <p>Film 3 "From plastic waste to hot meals" dw.com/p/2p8Fy</p> <p>Film 4 "Plastic fantastic: Nigeria's carrier bag fashionistas" dw.com/p/2csAb</p> <p>Film 5 "Plant-based plastic from a seaweed startup" dw.com/p/2IIIn</p> <p>Handout 9</p>

Module 4 | Collective action/community activities

Duration	Description of content	Learning objectives	Materials and implementation
20 minutes	Introducing the idea of collective action with the example of “the largest beach clean-up project in the world” in Mumbai	The knowledge that an individual’s actions can spark larger changes	Article 3 “Fighting for clean beaches in Mumbai” <i>dw.com/p/2nwpd</i> Handout 10
20 minutes	Collecting ideas: What can we do in our own environment?	Collecting various ideas on how plastic waste in schools and neighborhoods can be prevented/reused Returning to the poster from Module 2	Adding to poster “Living without plastic” from Module 2 Handout 11
20 minutes	Agreeing three concrete proposals	Planning for concrete steps: What, who, where, when?	Handout 12 Worksheet 12



Using picture cards to introduce the topic

Duration: 30 minutes

Tasks for the project leader

Place the **picture cards** on the wall or floor in such a way that a number of people can gather around them.

» **Picture cards**

Ask the participants to choose the card that most interests them.

Ask the participants to describe:

- A) What they like about the picture
- B) Why they chose it
- C) In what way the picture might relate to them.

(Duration: 10 minutes)

Ask the participants to consider how they would present the respective pictures to those gathered and what arguments they would put forward to the group.

(Duration: 5 minutes)

Tasks for the project participants

Each participant chooses a picture that interests them most. As a result, small groups will form around each picture.

(Duration: 5 minutes)

After reflecting on their respective pictures, each small group should present their photo to everyone gathered.

(Duration: 10 minutes in total)



Introduction to the topic via film

 **Duration: 35 minutes**

Film 1 "How harmful are plastic bags to the climate?" or

Film 2 "What happens to my empty plastic bottle?"

» **Film 1**

» **Film 2**

Tasks for the project leader

You will need a DVD player and TV or a PC with internet access.

Choose one of the animated info films:

- "How harmful are plastic bags to the climate?"
from the DVD or on the webpage under dw.com/p/2Y8b9
- "What happens to my empty plastic bottle?"
from the DVD or on the webpage under dw.com/p/2phRV

Distribute **worksheet 2.1** (with the questionnaire about plastic bags) or **worksheet 2.2** (on the topic of plastic bottles) to the project participants before you show the film. Allow the participants to read the questions before watching the film.

» **Worksheets
2.1 and 2.2**

(Time for introducing the film, distributing worksheets and watching the film: 10 minutes.)

Tasks for the project participants

Each participant should fill out the worksheet while watching the film. At the end, they should be given a further 10 minutes to complete the worksheet.

(Duration: 10 minutes)

After filling out the worksheet, participants should take turns presenting their answers to the group and subsequently discussing them.

(Duration: 15 minutes)



Questions about film 1:
“How harmful are plastic bags to the climate?”

1. Which raw material is used to produce plastic bags?
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2. Why is that problematic and how is it connected to climate change?
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.....
.....
3. How long, on average, is a plastic bag used for?
.....
4. Where do most plastic bags end up?
.....
5. How long, on average, does it take for a plastic bag to break down?
.....
6. What problems do plastic bags present when they are disposed of in the environment?
.....
7. Name various strategies followed by different countries in dealing with plastic bags.
.....
.....
8. What do you think of these strategies? Please give reasons for your answer.
.....
.....
.....
9. What are the alternatives to plastic bags?
.....
10. Do you think these alternatives are easy or complex and difficult to implement? Please explain why.
.....
.....
.....



Questions about film 2:
“What happens to my empty plastic bottle?”

1. What raw material is used to make plastic bottles?
.....
2. How many plastic bottles are sold worldwide every minute?
.....
3. How often can plastic bottles be refilled?
.....
4. What happens to the majority of plastic bottles?
.....
.....
.....
5. How many tons of plastic waste end up in the ocean?
.....
6. How long, on average, do plastic bottles take to break down?
.....
7. What is the problem with plastic in the oceans?
.....
.....
8. What alternatives are there to plastic bottles?
.....
.....
.....
9. Do you believe these alternatives are easy or difficult and expensive to implement?
Please give reasons for your answer.
.....
.....
.....
10. What about you? Where do you get your drinking water and how do you transport it?
.....
.....



Group work with infographics

Duration: 40 minutes

Tasks for the project leader

Separate the participants into two groups and distribute **worksheets 3.1 and 3.2**.

(Duration: 5 minutes)

» **Worksheets
3.1 and 3.2**

Tasks for the project participants

The participants should come to an agreement on what is asserted in the infographics on the basis of the questions. They should consider how to present their findings.

(Duration: 10 minutes)

After the group work, they should present their findings to the group. The presenters should invite the other participants to give their opinions.

(Duration: 15 minutes for presentation, 10 minutes for discussion)

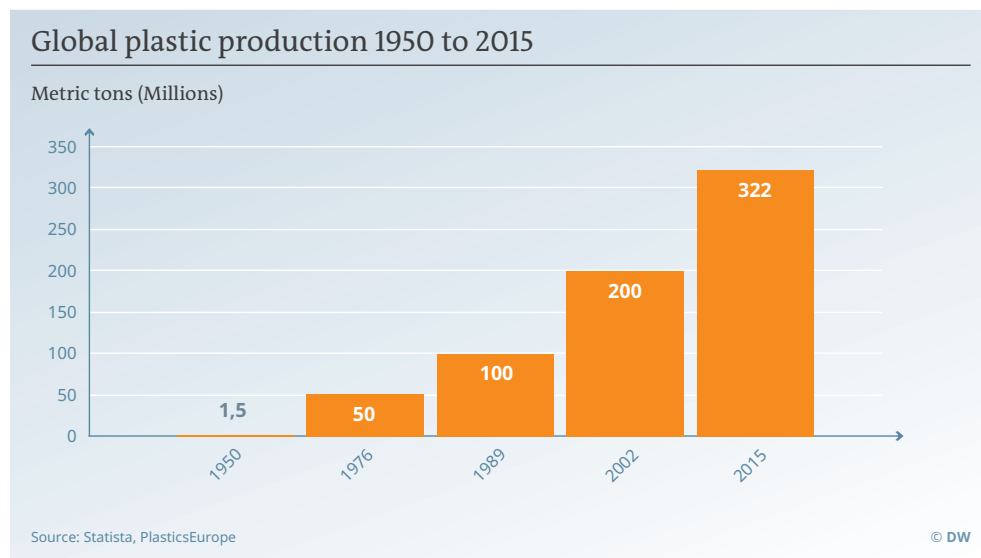


Work group 1

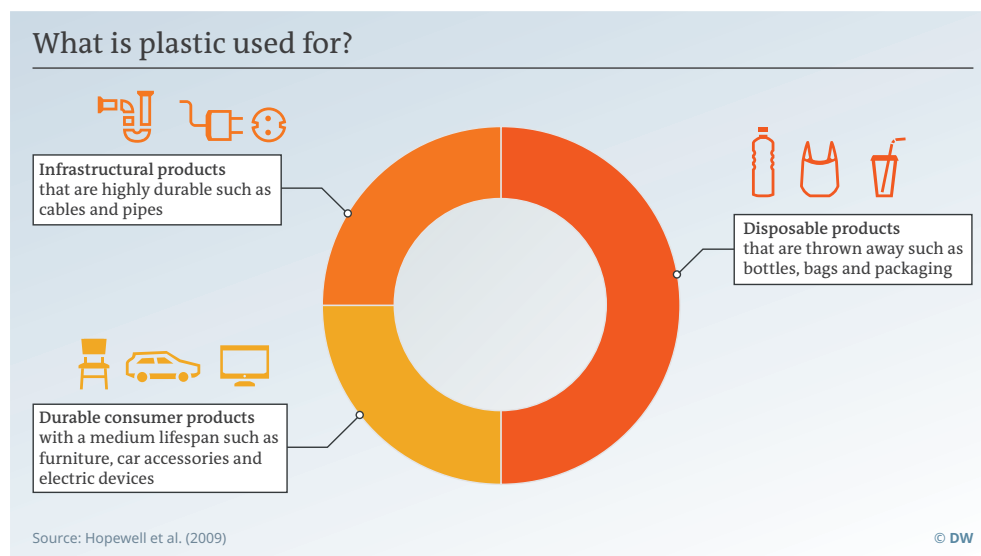
Please examine the following graphics and explain what you see.

Working with your group, please explain the main problems relating to the global development and use of plastic.

What are the consequences and which areas are particularly important to address in order to curb the plastic problem?



Infographic 1



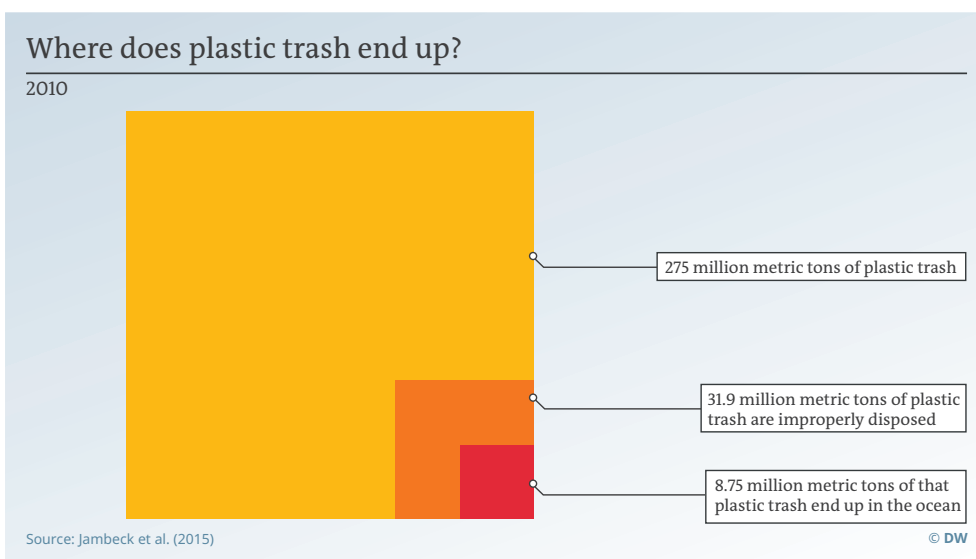
Infographic 2



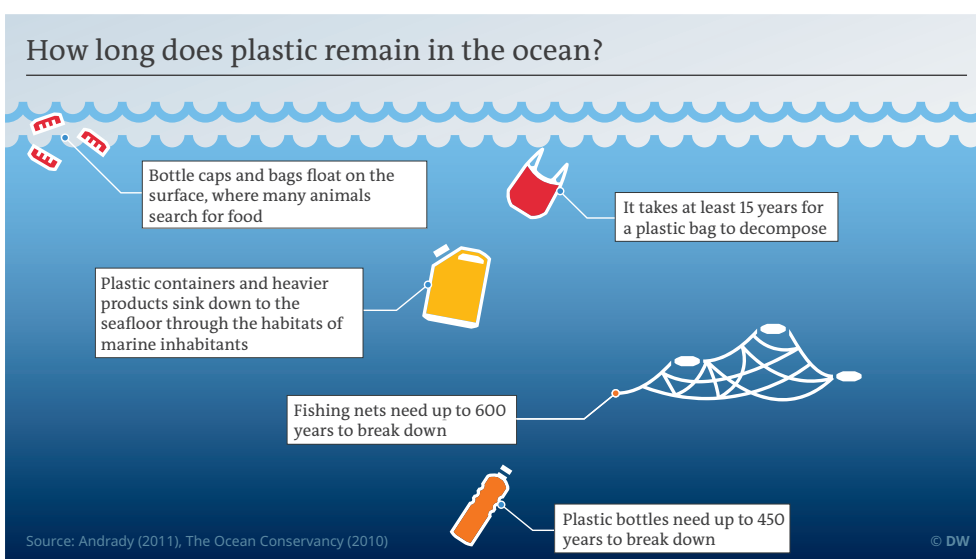
Work group 2

Please examine the following graphics and explain what you see.

Working with your group, please explain the main problems relating to the global development and use of plastic.



Infographic 3



Infographic 4



Personal use of plastic

 **Duration: 20 minutes**

Tasks for the project leader

Distribute **worksheet 4** to the participants. Each person should describe how they use plastic by reconstructing their daily routines.

» **Worksheet 4**

(Duration: 10 minutes)

Have each of the project participants describe their use of plastic to the group.

(Duration: 10 minutes)



My daily routine and the use of plastic

Example

I get up at 7:00am and switch off my **plastic alarm clock**. Then I put on my **plastic sandals** and head to the bathroom where I brush my teeth with a **toothbrush made from plastic** and gargle with water from a **plastic cup**. So I don't slip and so my feet don't get cold, I stand on a **plastic bath mat** in front of the sink. I hop into the shower, close the **plastic curtain** and squeeze a glob of shampoo out of a **plastic bottle**. After the shower, I moisturize with lotion from a **plastic container**.

After that, I go to the kitchen, where I turn on the **plastic kettle**. I make a tea and throw the teabag into a **plastic bag** lining the **plastic trash can**. Then I reach for some bread wrapped in **plastic packaging** ...

Please reconstruct your daily routine and describe when and how you use plastic:

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Avoiding/reducing my own plastic consumption as well as that of my family/those in my environment

 **Duration: 20 minutes**

Tasks for the project leader

Distribute **worksheet 5** and have the participants describe their daily routines but with reduced plastic consumption.

» **Worksheet 5**

Tasks for the project participants

The participants should take another look at their daily routines and consider whether and how they can reduce their own plastic consumption as well as that of their family and others in their environment. They should try to be as realistic as possible and only describe affordable and available alternatives.

(Duration: 10 minutes)

After the worksheet has been completed, some of the daily routines should be presented and discussed with the group.

(Duration: 10 minutes)



My daily routine and reducing my use of plastic

Example

I get up at 7:00am and switch off my **metal alarm clock** instead of a plastic one. Then I put on my **plastic sandals (because other types of sandals are too expensive for me)** and head to the bathroom where I brush my teeth with a **toothbrush made of plastic (because I can't find another kind of toothbrush)** and gargle with water from a **glass** instead of a plastic cup. So I don't slip and so my feet don't get cold, I stand on a **bamboo bath mat** instead of a plastic one in front of the sink. I hop into the shower, close the **plastic curtain (because shower curtains made from other materials are too expensive and don't dry well)**, and take a glob of **home-made shampoo from a glass** container instead of using shampoo from a plastic one. After the shower, I moisturize with homemade lotion from a **glass container**.

I make a tea and throw the teabag into a **metal trash can** lined with a **recycled polyethylene bag** instead of a plastic one. Then I cut myself a slice of **fresh bread** instead of using bread wrapped in plastic packaging ...

Please reconstruct your daily routine and describe when and how you can replace plastic as well as when you can't avoid it:

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What other thoughts do you have about avoiding plastic? What could your family change with regard to their use of plastic?

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Alternatives to plastic in our country

 **Duration: 20 minutes**

Tasks for the project leader

Place the **poster** “Living without plastic” in the classroom.

» **Poster**

Discuss the feasibility of the proposals for your own country with the project participants and together with them add ideas that might be more realistic. You can also use ideas from previous lessons here.

Please leave some of the empty spaces blank to be filled in later with further ideas the group may have.

(Duration: 20 minutes)



Engaging with DW reporter Tamsin Walker's experiment to avoid plastic

 **Duration: 20 minutes**

Tasks for the project leader

Please read **article 1** "Plastic-free: liberty or slavery" to the project participants.

The article is also available online under [dw.com/p/1HYGH](https://www.dw.com/p/1HYGH)

Tasks for the project participants

The participants should fill in **worksheet 7** while the article is read out.

(Duration: 10 minutes)

» **Worksheet 7**

The participants can then discuss the questions and their answers.

(Duration: 10 minutes)

Plastic-free: liberty or slavery?

The New Year being the ultimate time for new leaves, I am turning one over. A plastic-free one. Yep, for the next month, I'm going to banish packaging from my life and home. And I'm dragging my kids along for the ride.



Out with the old – plastic is going to be a hard habit to break

At Global Ideas we come across a lot of interesting people doing impressive things in the name of improving and ultimately saving our planet. Invariably, their endeavors make me think about all the things I could be doing, but in truth, I am not technologically savvy enough to create floors that harvest energy and my entrepreneurial spirit is too sluggish to push me to launch a brand of sustainable clothing.

But when my colleague published an interview with Lauren Singer, a young New Yorker who has generated virtually no waste in the past three years, a quick rummage through my carrier bag failed to yield any good excuses.

So, here's the plan. For the next month, I will attempt to keep myself and my five children (four at home, one who comes and goes) using products that have been spared the plastic wrap treatment. And because I spend a large chunk of my week at work, and am on a budget, I am aiming to do it without investing any more time or money than my usual grocery run would cost me. Did I hear you chuckle? I think I did. And well you might...

Although my "experiment" – thus named by my eldest daughter, who given my culinary skills justifiably has the jury out on the idea of homemade deodorant – officially kicked off yesterday, the past week has been a whirlwind of preparation.

Apart from the endless hours spent online trying to source the basics, I have purged my flat of all packaging and decanted what I had into glass jars, which are henceforth only to be filled with items I can source in loose or paper-wrapped form. I have also traipsed my children all over Berlin in search of items such as unwrapped cheese, tofu, shampoo and cocoa butter – a staple in recipes for the lip balm and chocolate we might, in our former lives, have bought in plastic.

Most of this foraging has seen me return empty-handed, disheartened and asking myself two questions that are as obvious as the answers elusive. Firstly, how am I going to convince a discerning sweet-toothed three-year old that my not-so-artisanal "strawberry and banana leather" tastes as good as jelly bears?

And secondly, and more importantly, why? Seriously, why is almost everything – from cucumbers in sheaths and tomatoes in absurd boxes that pop open at the worst of times, to toilet paper that is hardly destined for great things – wrapped in "protective" plastic?

Does it owe its ubiquity to its transparency? Does the fact that we can see through much of it, mean we have stopped seeing it at all and are blind to the environmental impact? Even the manifold organic food stores I have scoured over the past few days fail to offer their customers enough unpackaged produce to ensure them a balanced diet. That seems like a contradiction. And in Berlin no less, a city that prides itself on having a thumping alternative artery.

Early days

But I will not despair prematurely. It takes time to break any habit. And trying to quit the plastic one is somehow akin to giving up smoking and being told you can't have any of the things you are accustomed to unless you have a quick cigarette first. Go on, one won't hurt. What difference is one more rice packet going to make? Perhaps not much in the grand scheme of 21st century plastic waste, but if there are alternatives, why not go with them.

The one on every Berlin zerowaster's lips is "Original Unverpackt", a shop, which as the name suggests, is entirely devoted to an unpackaged lifestyle. It stocks hundreds of products, is a brilliant idea and clearly exactly what I need. Sadly, though, it was closed over the Christmas break, during which time I could have

explored it at my leisure. It is now open for business again, but only at times when I am either at work or hurrying home therefrom to relieve the babysitter and cook dinner – which at my current rate of shopping success amounts to boiling veggies and making more strawberry and banana leather. Hmmm.

As soon as I have a day off, I will check out the store, but even before embarking on the journey, I know that in taking it, I will be way overspending on my time budget. It will be at least an hour and a half round trip, and that doesn't include actual shopping minutes. Add to that the fact that I don't have a car, live on the fifth floor without an elevator, and would have to cart enough to feed six people for a week – in glass jars and bottles no less – and "Original Unverpackt" doesn't seem like my most viable option.



Some dried fruit and oats are not that hard to get hold of, rice seems to be a different story

There is a market closer to my home, and I had planned to go there before work this morning, but the cold that has snapped over Berlin these past few days kept the traders away. I turned up to an empty market square. Maybe I will have more luck on Friday. In the meantime, I did come across a flyer for a local food assembly and will be placing my order later tonight. It will be ready for collection on Thursday, and instructions on the website tell members to bring their own containers. Music to my ears. I should be able to get cucumber and broccoli there – two things my kids eat with happy abandon – but it doesn't solve other problems. Toilet paper, for example.

A delicate issue

I don't want to bang on about it, but this bare necessity is absurdly hard to get hold of in any kind of environmentally friendly wrapping. Not even at "Original

Unverpackt." After hours of research, which turned up letters from manufacturers who say they bundle their wares in plastic packaging for hygiene reasons, I finally stumbled upon a company in Munich that sells extra large loo rolls, tied neatly with a piece of paper string. Bingo! I ordered a box of 24 rolls. For a mere 39 euros plus postage and packaging (not plastic).

Yes, it is insanely expensive and it seems ludicrous to ship it hundreds of kilometers. The same applies to the 12 bamboo toothbrushes that set me back another 40 euros, but I am assured both they and the toilet paper will last for longer than their more ordinary counterparts. We'll see. I hope to be proved right, not only because my older children are starting to question my sanity, but because if the premium is too great, I am unlikely to trade my old habit for this new, plastic-free one on a more permanent basis.

For the time being, however, I am fully committed to the New Year's adventure. It feels full of potential, both in terms of doing my bit for the environment, but also, given the inadvertent side effects of decluttering and detoxifying, doing my bit for myself and my family.

05.01.2016, Tamsin Walker (DW)
dw.com/p/1HYGH



Questions on Article 1: “Plastic-free: liberty or slavery?”

1. What was the main goal of Ms. Walker’s “experiment?”

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2. What challenges did Ms. Walker and her children have to overcome during the experiment?

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3. Why did Ms. Walker give her article the title “Plastic-free: liberty or slavery?”

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4. How difficult would it be for you and your family to give up plastic? Please provide reasons for your statements.

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A controversial plastic ban: Engaging with Zimbabwe's styrofoam ban

Duration: 20 minutes

Tasks for the project leader

Please read or have one of the project participants read out **article 2** "Cleaning up Zimbabwe with a styrofoam ban."

» **Article 2**

The article is available online under: dw.com/p/2I7FM

Tasks for the project participants

The participants should fill out **worksheet 8** while the article is being read aloud. Please provide time at the end for everyone to prepare their arguments for discussion.

» **Worksheet 8**

(Duration: 10 minutes)

After that, the participants should discuss the questions together. The discussion section at the end of the worksheet allows for a dialogue on participants' attitudes to this kind of plastic ban and how it is being dealt with.

(Duration: 10 minutes)

Cleaning up Zimbabwe with a styrofoam ban

Styrofoam pollution is a serious problem in Zimbabwe. The government is set to ban the ubiquitous material for use in food containers and to promote greener alternatives. But not everyone is happy with the move.



Kaylites litter most parts of Zimbabwe as authorities do not frequently collect refuse

Zimbabwe's streets, rivers, drains and lakes are awash with discarded, non-recyclable Styrofoam food containers. A problem worsened by the failure of authorities to routinely collect garbage, Zimbabweans are often left with little choice but to dump the material where they see fit.

This environmental devastation is poised to change this month when Zimbabwe's Environment Management Agency (EMA) bans food containers made from Styrofoam, or kaylite as it is more widely known across the country.

"That is a starting point to fight litter in our country," EMA spokesman Steady Kangata told DW. "Come October 17, we are not going back."

The move was proposed in July, after the University of Zimbabwe in the capital Harare released findings outlining the dangers of kaylite. The ultra light-weight material is cheap but the environmental cost is great, it concluded.

Made from petroleum-based polystyrene beads, kaylite contains 57 toxic chemicals that become active when incinerated, contributing to air pollution and "ozone layer disruption," says the EMA. The material

doesn't biodegrade, but breaks down into smaller pieces that enter waterways. Chemicals in kaylite food containers can also leach into food and water, according to the University of Zimbabwe's study.

Major fines

Environment Africa, a non-profit organization that calls for African solutions for the most pressing environment and development challenges, welcomed the policy.

"The menace of kaylite on the environment is shocking, so banning it is the way to go," said Sandra Gobvu, Environment Africa spokeswoman.

The NGO says it's encouraging businesses to be innovative and to start thinking about alternative environmentally-friendly packaging, such as paper or cardboard containers. But getting used to them will be a process.

"What I do not like about paper containers is that they do not keep the food warm for a long time. I still prefer kaylites," said Linda Kachiti, who is a frequent customer of one of the busiest food outlets in Harare's central business district.

But she, like everyone else across the country, will have to get used to the new regulations because once they officially take effect, the EMA says those found to be in breach could face fines of between US\$30 to US\$5,000 (25 and 4200 euros). The law targets importers, manufacturers, sellers and businesses that use kaylite containers to package food.

Ketiwe Nyarunga, who runs a small food outlet in downtown Harare, says he was about to run out of stocks of kaylite packaging when the pending switch was made. "We then made a decision to start preparing for the October deadline." Though now ready for the big day, he says "it comes at a cost."

Depending on whether you talk to the environmental agency or to business groups, immediate price hikes will fall somewhere between one and 10 percent. But the EMA is also advising vendors to encourage customers to sit in to eat, thereby avoiding packaging and any additional expense. It is all part of a wider campaign to fight litter.

Mixed reviews

The apparent speed at which the ban is being implemented also met with negative reactions. The EMA had initially ordered an immediate prohibition on kaylite, but following an outcry in the food and packaging sectors, agreed to grant a three-month reprieve to allow businesses to switch to more eco-friendly containers.

“The 90-day period is far better than the knee-jerk reaction we received from the government,” Denford Mutashu, president of the Confederation of Zimbabwe Retailers, told DW, adding that he would like to see it extended.

That though, seems highly unlikely. Not least, because those 90 days are by no means the full story. The EMA first introduced – but didn’t enforce – the legislation in 2012.

“We wanted to give companies time to find alternatives,” Kangata said. “We are very alive to the performance of the economy; so we did not want to rush to enforcing the law, but we expected them to be prepared for its enforcement.”

Should go further



Environment professor Christopher Magadza

Zimbabwe isn’t the first African country to take bold steps toward getting rid of plastic waste. In August, a ban on plastic carrier bags in Kenya came into force after years of delays. Anyone manufacturing or using plastic bags faces up to four years in jail.

Christopher Magadza, an environment studies professor at the University of Zimbabwe, says his country should follow suit and extend its ban beyond kaylite containers.

“If you get to Rwanda airport, they will kindly ask for your plastic containers of your duty free drinks or stuff and give you a recyclable container,” Magadza told DW, explaining that the country therefore has greater control over waste.

“There is no biodegradable plastic,” said Magadza. “So when you think of plastics, think of polluted water or air. Dams, seas and oceans are full of plastics that contaminate aquatic animals and we eat some of them.”

*02.10.2017, Columbus Mahvunga (DW)
dw.com/p/2l7FM*



Questions on article 2:
“Cleaning up Zimbabwe with a styrofoam ban”

1. What problems are caused by discarded styrofoam food packaging in Zimbabwe?

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.....
.....

2. Why is styrofoam food packaging so popular with customers?

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.....

3. What has Zimbabwe’s government decided upon?

.....
.....

4. Why are there mixed reactions to this decision?

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.....

5. What further steps has Kenya taken?

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.....

Discussion

What do you think of the decisions by Zimbabwe, Kenya and Rwanda with regard to dealing with plastic? Do you agree or disagree with them? Please explain why.

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When it comes to dealing with plastic, what alternatives could there be to these policies?

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Analyzing different recycling methods and the use of plastic as a recyclable material

 **Duration: 20 minutes**

Tasks for the project leader

Please show the following three films. They are available on the DVD or alternatively online:

Film 3 "From plastic waste to hot meals"

dw.com/p/2p8Fy

(ca. 1 minute)

» **Film 3**

Film 4 "Plastic fantastic: Nigeria's carrier bag fashionistas"

dw.com/p/2csAb

(ca. 1 minute)

» **Film 4**

Film 5 "Plant-based plastic from a seaweed startup"

dw.com/p/2IIIn

(ca. 1 minute)

» **Film 5**

Have an open discussion (without a worksheet) about which examples project participants liked best and whether they see opportunities for applying such measures in their own country.



Introducing the idea of collective action

 **Duration: 20 minutes**

Tasks for the project leader

Read out **article 3** "Fighting for clean beaches in Mumbai."

You will also find it online: dw.com/p/2nwpd

» **Article 3**

Afterwards, have all participants discuss their impressions. Suitable introductory/discussion questions could include:

1. How did one individual inspire 300 people to action and create the "largest beach clean-up project in the world?"
2. Do you believe the changes to the beach – aside from the positive environmental aspects – also had positive social effects for people?
3. What does Mahatma Gandhi's famous quote "be the change you want to see in the world" mean to you?
4. Could the tradition of "Shram Daan" – in other words unpaid, volunteer work for the community – also be drawn upon in your country?
5. What is the situation on beaches and on the banks of rivers and lakes here?
6. What can we take from this example?

Fighting for clean beaches in Mumbai

Mumbai's beaches are covered in trash. While most people just complain, one man has set out to change that – and kicked off the largest beach clean-up project in the world.



Trash on Mumbai's beaches

India has a coastline of more than 7,000 kilometers, but sadly, it's not all pristine beaches and stunning cliffs. In fact, for Mumbai's citizens, the shore is more like a landfill. The beaches are covered with trash – colorful plastic bags, bottles and food packages are everywhere, often entangled in old fishing nets or rotting fabrics.

Most people are outraged by the situation, angry at the city government for not cleaning it up or at those who throw their trash in the streets or even straight onto the beach. But one man decided to stop complaining and instead, take matters into his own hands. Literally.

During the week, 36-year-old Afroz Shah is a constitutional lawyer in Mumbai's high court. But on the weekends, he cleans up the beach. It all started two years ago when he moved to an apartment with a view of Versova beach in Mumbai. He had lived in the same neighborhood as a child and played on the beautiful beach, so was excited to move back there.

"I am an ocean lover," he says. "Being near water bodies gives me peace, it makes me happy."

But, the view from his windows wasn't at all what he had expected. "Near the jetty, there were walls of garbage standing five-feet tall," Shah said. He found that going for a stroll was an unpleasant experience.

"My beach not only has plastic, it also has organic filth because untreated sewage is being thrown into the sea. It's full of muck and organic filth and when it's tied up in so many things, it sinks into the sand."

Be the change you want to see

Shah was undaunted. Adopting Gandhi's philosophy of 'be the change you want to see' he started what he called "Shram Daan, which means you volunteer to labor, you labor for your country." An 84-year-old neighbor agreed to join him.

That first morning, the pair went down to the shore with plastic garbage bags and flimsy surgical gloves to collect the trash. People stared at them. "Some people laughed at us, some people asked, 'Why are you doing the government's job?'" he recalls.

Others suggested he file complaints or sue the government. Shah simply continued. That day they filled two large bags with trash off the beach. Slowly, more people started to join them. Today, up to 300 people come to clean every Saturday and Sunday. Their support has turned Shah's labor of love into the biggest beach clean-up project in the world. For his dedication to this herculean task he has even been named "UN Champion of the Earth."



Shah getting the tractor and excavators to where they're needed on the beach

Global trash

"More than 80 percent of trash in the water comes from land," says Doug Woodring, co-founder of the Ocean Recovery Alliance. "If we keep feeding the ocean with our waste, it will keep sending it back to us with the tides and wind."



The mound of trash in the foreground will be transported by tractors to the waste segregation center

Globally, eight million tons of plastic enter the ocean each year, mostly in the form of packaging material, bottles and cigarette butts. "The global plastic production has doubled over the past 15 years, amounting to more than 300 million tons per year," says Gerhard J. Herndl, professor and chair of aquatic biology at the University of Vienna. "A large fraction of this plastic is not recycled but is dumped into the environment."

According to the NGO ecowatch, approximately one garbage truck of plastic makes its way into the ocean every minute.

"The problem with plastic is that it does not go away, and any animal, on land, sea or bird, will eat it if they can fit it in their mouth, if it has the smell of food or algae on it," says Woodring. "This does not mean they will all die, but it does mean that toxins can easily make their way into our food chain, particularly when the smallest animals and filter feeders are also eating it."

Homemade problem (partially)

While much of the trash on Mumbai's beaches comes from the ocean, plenty is generated by the city's inhabitants themselves. So Shah's second goal was to raise awareness about single-use plastics by involving the community.

"Cleaning up beaches from plastic litter certainly is first a way to make the beaches more attractive again for recreation, but more importantly it generates awareness to not discard plastics in the environment and to not litter," says Herndl.

On Versova beach, kids and adults, rich and poor now work shoulder-to-shoulder to pick up discarded plastic, seeing for themselves the impact of their disposal.

Shah and the volunteers have already collected more than 7,000 tons of trash and the city government now sends excavating equipment and tractors to help transport the plastic to the local waste segregation site, where anything recyclable is taken out.

"Every weekend we clean, and every weekend the beach is dirty again. But we don't get discouraged," says Nilofer Kazi who joined the volunteers a year and a half ago. "There were layers of garbage before, and we can see we are making a difference." At home, she has now started sorting and separating wet and dry waste and she counsels her neighbors to stop using single-use plastic.

In between his court appointments, Shah conducts outreach workshops in colleges and schools; NGO's invite him to talk about the impact of plastic and littering.



Kids from the slum just south of the beach are the most regular volunteers

"That's why I love when small kids come up to me and say, 'today there was too much plastic, it's not good, is it?' Then I feel, my job is done," says Shah. "They've understood there's a problem. They'll learn to handle it."

21.11.2017, Chhavi Sachdev (DW)
dw.com/p/2nwpsd



Collecting ideas:

What can we do in our own environment?

Duration: 20 minutes

Tasks for the project leader

Return to the **poster** "Living without plastic" from Module 2 and add the project participants' further collective ideas.

» **Poster**

Agreeing to three concrete proposals

Duration: 20 minutes

Tasks for the project leader

To conclude the learning pack, the participants should come up with and implement concrete projects to prevent or reduce plastic waste.

Examples could include:

- Establishing a poster campaign for a small exhibition, music or theater scene to create awareness of the issue among other pupils
- Regular plastic waste collection days around the school
- Creating artwork made of plastic waste
- Use of alternatives to plastic plates and styrofoam packaging for food in the school canteen.

A project proposal template is available in **worksheet 12**.

» **Worksheet 12**



Our Proposal

Area School Local Town/Council Education/Awareness

Discuss the feasibility of different ideas. You should also discuss possible obstacles but with a view to overcoming them.

- What parts of our “big vision” can actually be implemented?
- What are the first steps?
- How can we include different groups and win them over to get engaged in the project?

Title

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Goals

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Measures

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First steps

1.
2.
3.

Dates for implementation

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Global Ideas




The multimedia environment magazine

Around the world, imaginative people and innovative projects are working to protect our climate and biodiversity. Global Ideas tells their stories on TV and online.

Global Ideas is Deutsche Welle's multiple award-winning, multimedia environment magazine supported by the German Environment Ministry's International Climate Initiative. Established in 2009, it showcases TV reports, background articles, web features and more as a means of informing people all over the world about solution-based initiatives to protect the planet.

Global Ideas is more than just television. Think interactive specials such as a visit with Africa's wild animals or explainers that answer complex questions like "does global warming really exist?" The magazine also has an educational element in the form of carefully crafted "learning packs" on key environmental topics. Available free of charge in German, English and Spanish, these learning materials include videos, articles, posters, picture cards, worksheets and teacher handouts. They are available as a brochure with an accompanying DVD, as well as for download online.

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