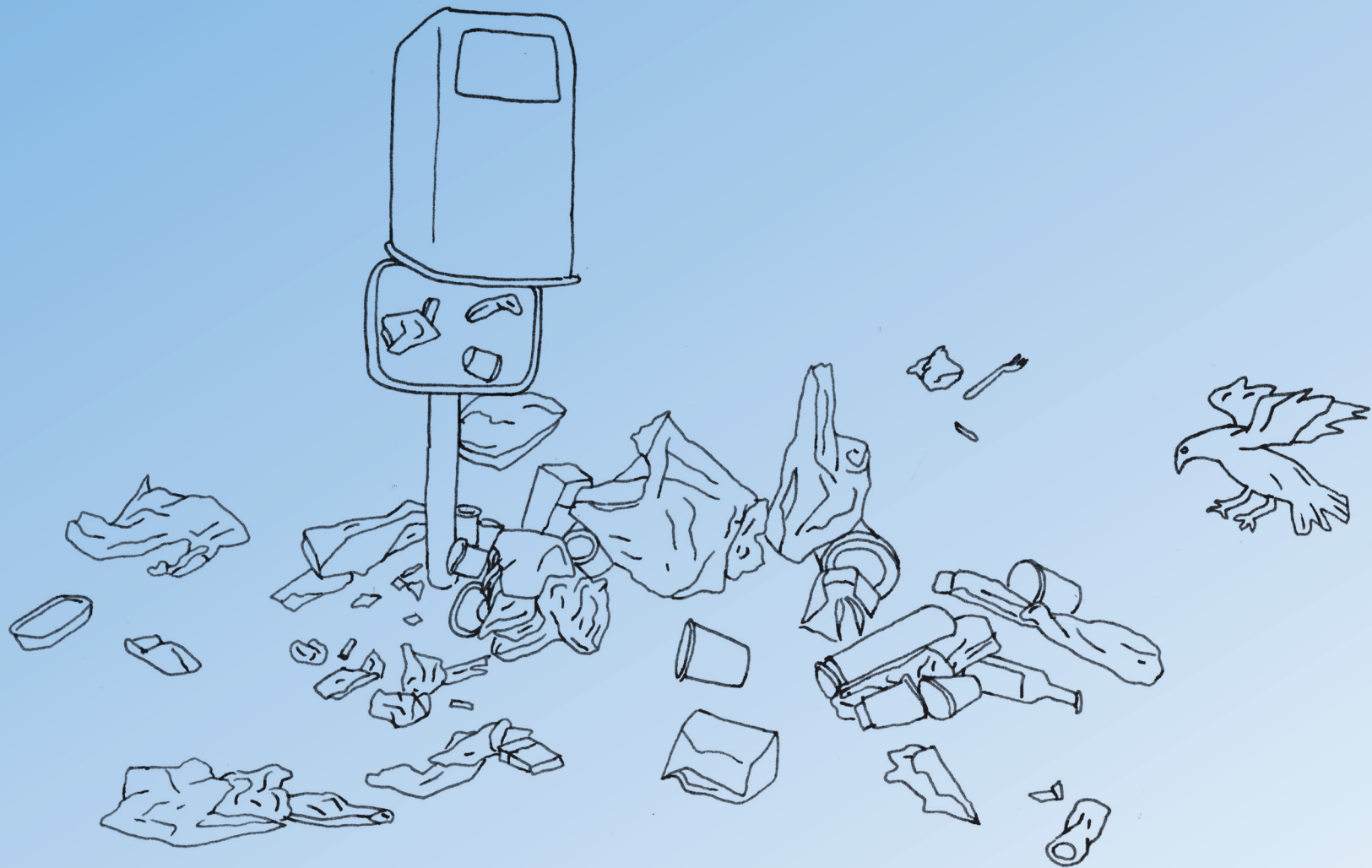


# PLASTIC, WASTE & ME



Unpacked!



## HOW DOES THIS BOOK WORK?

You can open this book anywhere - each page stands for itself.



This is a pictogram, a symbol that conveys its meaning through resemblance to a physical object. We use it to indicate people in all their diversity.

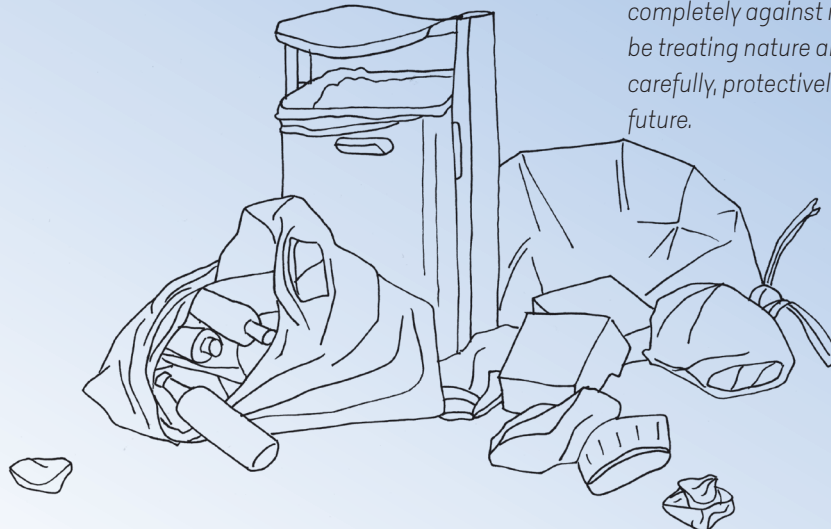
The plastic crisis affects us all, but not all to the same extent – and it's these issues of fairness and diversity that this book is particularly interested in. We have looked for a language that embraces gender diversity. We want to include everyone and also address those who do not identify themselves as either male or female.

This book answers young people's questions about plastic in pictures and stories.

Plastic is a wily character, though, and can assume so many different guises that we were unable to find one symbol to cover everything that is plastic. We therefore decided to go another way, and generally use the color orange to indicate plastic. Plastic's life cycle begins with oil or gas, which we show in yellow. Carbon dioxide is gray in this book.

What is a youth advisory board? To find out what interests young people and what they think of the visuals over the following pages, we asked them ourselves. The names of the young people from all over the world who helped us can be found in the book credits. ➤ WHO MADE THIS BOOK?

Many terms aren't all that easy to understand. We explain them in a glossary at the end of the book – so you can look them up whenever you need to. ➤ WHAT DO THESE TERMS MEAN?



## WE CAN'T IGNORE PLASTIC! Foreword

Cows and goats feeding on plastic at garbage dumps. Plastic waste on the beach, in trees, on fields and roads. When I visit countries like Senegal, India, or Mexico, where the Heinrich Böll Foundation works with its many partners to ensure a democratic and livable future, I see how much plastic – and especially plastic waste – has spread all over the planet. We all know that some of it is waste from our consumer societies, which is poisoning people and the natural environment in other, usually poorer countries.

When I was a child, plastic was a symbol of progress and modernity. Ornate porcelain or ceramic bowls were swapped out for plastic imitations. A salad from a plastic bowl? Even as a young girl, I didn't like it and couldn't imagine that it was healthy. Now I know that I was right to have doubts. Then as now, products were manufactured that are difficult or impossible to degrade naturally. Plastic is found in the food chain and now even in the smallest crustaceans, in the deepest depths of the ocean. This goes completely against my idea of how we should be treating nature and ecosystems: mindfully, carefully, protectively, and with an eye to the future.

We collected questions relating to plastic and found answers in studies and from experts. We formed a youth advisory board with young people from Germany and around the world to work together on this book. It has turned into an informative and disturbing journey: We start where the life cycle of plastic begins, at the wellhead where oil and natural gas – necessary for the production of plastic – are extracted. We explain what types of plastic exist, what problems plastic waste causes, and what littering means for us humans, the climate, nature, and animals. And we show alternatives and solutions.

Our common goal: to stop the flood of plastic. My personal next step: to ban all plastic from the bathroom! That's what I want to learn next.

Berlin, March 2021

Barbara Unmüßig

Member of the Board of the Heinrich Böll Foundation



# WHERE DO I FIND WHICH QUESTION?

## Content

### How does this book work?

**We can't ignore plastic** Foreword

**Where do I find which question?** Content

**Plastic – what is it all about?** **Waste – what's the problem?**

- |   |  |
|---|--|
| <b>1</b> What's made of plastic?                        | <b>22</b> How many times can we wrap the earth?    |
| <b>2</b> What's in plastic?                             | <b>23</b> How are PET bottles made?                |
| <b>3</b> How does plastic come to us?                   | <b>24</b> How much plastic does the world make?    |
| <b>4</b> How much plastic surrounds me?                 | <b>25</b> What links prosperity & plastic waste?   |
| <b>5</b> How much plastic is in our clothes?            | <b>26</b> How does plastic affect people?          |
| <b>6</b> What does plastic do to marine life?           | <b>27</b> <u>Can you live on trash?</u>            |
| <b>7</b> Does plastic also kill land animals?           | <b>28</b> How much plastic ends up as waste?       |
| <b>8</b> <u>How did we live with less plastic?</u>      | <b>29</b> What remains after incineration?         |
| <b>9</b> How much plastic has been produced?.           | <b>30</b> Where does German waste go?              |
| <b>10</b> What is plastic?                              | <b>31</b> Who exports waste to Malaysia?           |
| <b>11</b> What are the main types of plastic?           | <b>32</b> How do zero-waste cities work?           |
| <b>12</b> How do polymers differ?                       | <b>33</b> How does PET recycling work?             |
| <b>13</b> What are additives?                           | <b>34</b> What prevents recycling?                 |
| <b>14</b> Why is plastic so dangerous?                  | <b>35</b> Why is plastic recycling not a solution? |
| <b>15</b> Where is the plastic in cosmetics?            | <b>36</b> Why reuse items?                         |
| <b>16</b> Can plastic make me sick?                     | <b>37</b> How much plastic can a festival avoid?   |
| <b>17</b> How can I know what's in it?                  | <b>38</b> What should products be like?            |
| <b>18</b> What does plastic do to your drink?           | <b>39</b> <u>Who invented plastic?</u>             |
| <b>19</b> How does plastic affect hygiene?              | <b>40</b> How long has plastic been around?        |
| <b>20</b> <u>Menstruation without plastic or taboo?</u> | <b>41</b> How long is plastic used?                |
| <b>21</b> What is plastic used for?                     | <b>42</b> How much plastic is there in the ocean?  |
|   | <b>43</b> Where is the ocean trash?                |
|   | <b>44</b> Where does ocean trash come from?        |

true stories

**What does this have to do with me?**

- 45** How does plastic threaten seabirds?
- 46** How do birds fly full of plastic?
- 47** Can we get plastic out of the sea?
- 48** How does plastic get into the sea?
- 49** Where does microplastic come from?
- 50** Where does plastic in soil come from?
- 51** How does plastic get into the soil?
- 52** How much plastic do I eat?
- 53** Does "bio"degradable plastic exist?
- 54** What about "bio"-based plastic?
- 55** How do labels lie?
- 56** Who's responsible for plastic waste?
- 57** How do I do a brand audit?
- 58** Who profits from plastic?
- 59** What is fracking?
- 60** What does plastic do to our climate?

**Are there solutions?**

- 61** How do we tackle the plastic crisis?
- 62** What are governments doing?
- 63** Why do we need a Plastic Treaty?
- 64** How can I become politically active?
- 65** How & where to buy zero-waste?
- 66** What do I need to do things differently?
- 67** How does reuse work as a system?
- 68** Living with a plastic factory
- 69** Who's fighting against plastic pollution?
- 70** Can we have a plastic-free campus?

**What do these terms mean?** Glossary

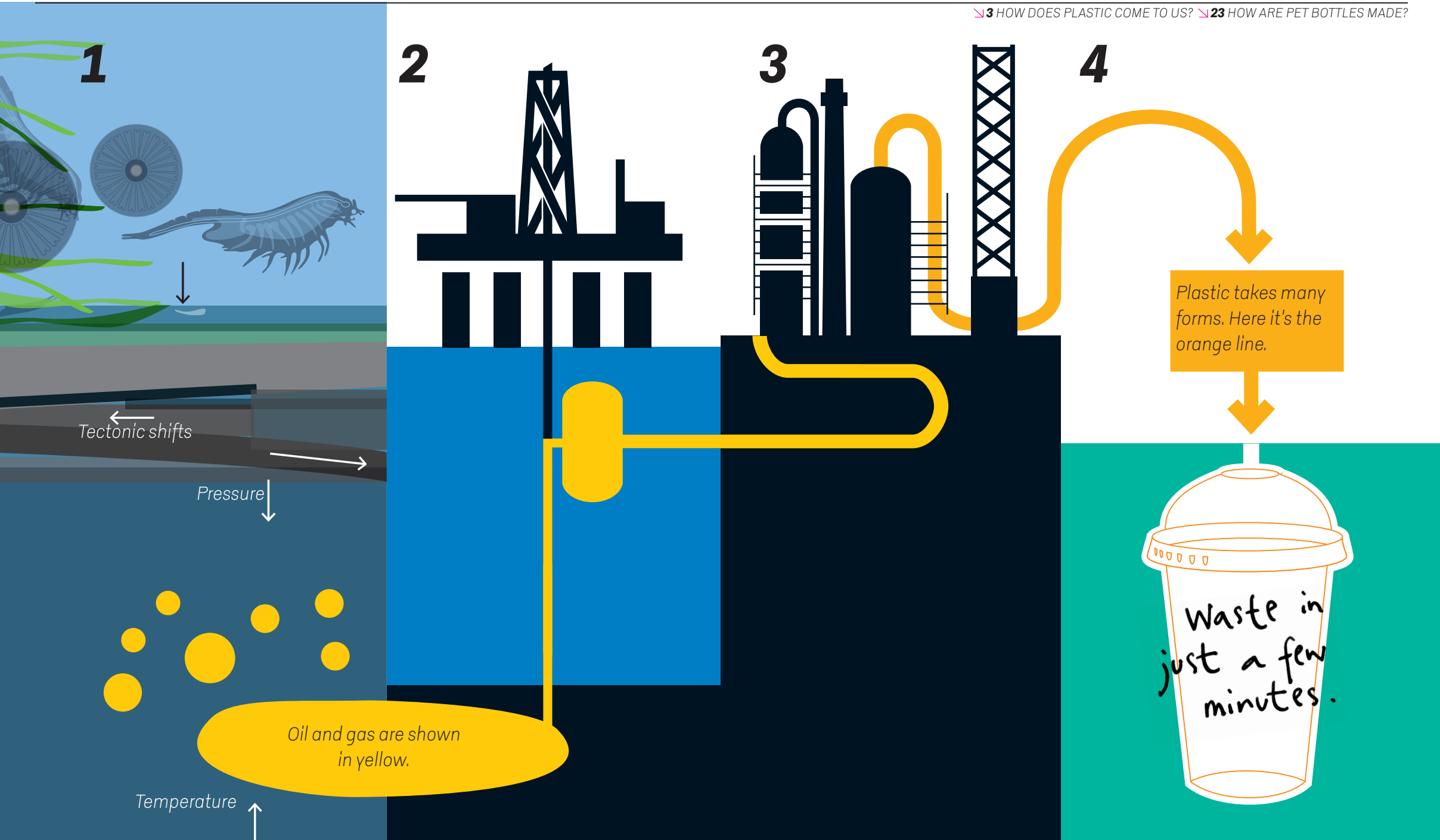
**Where did we get the facts?** Sources

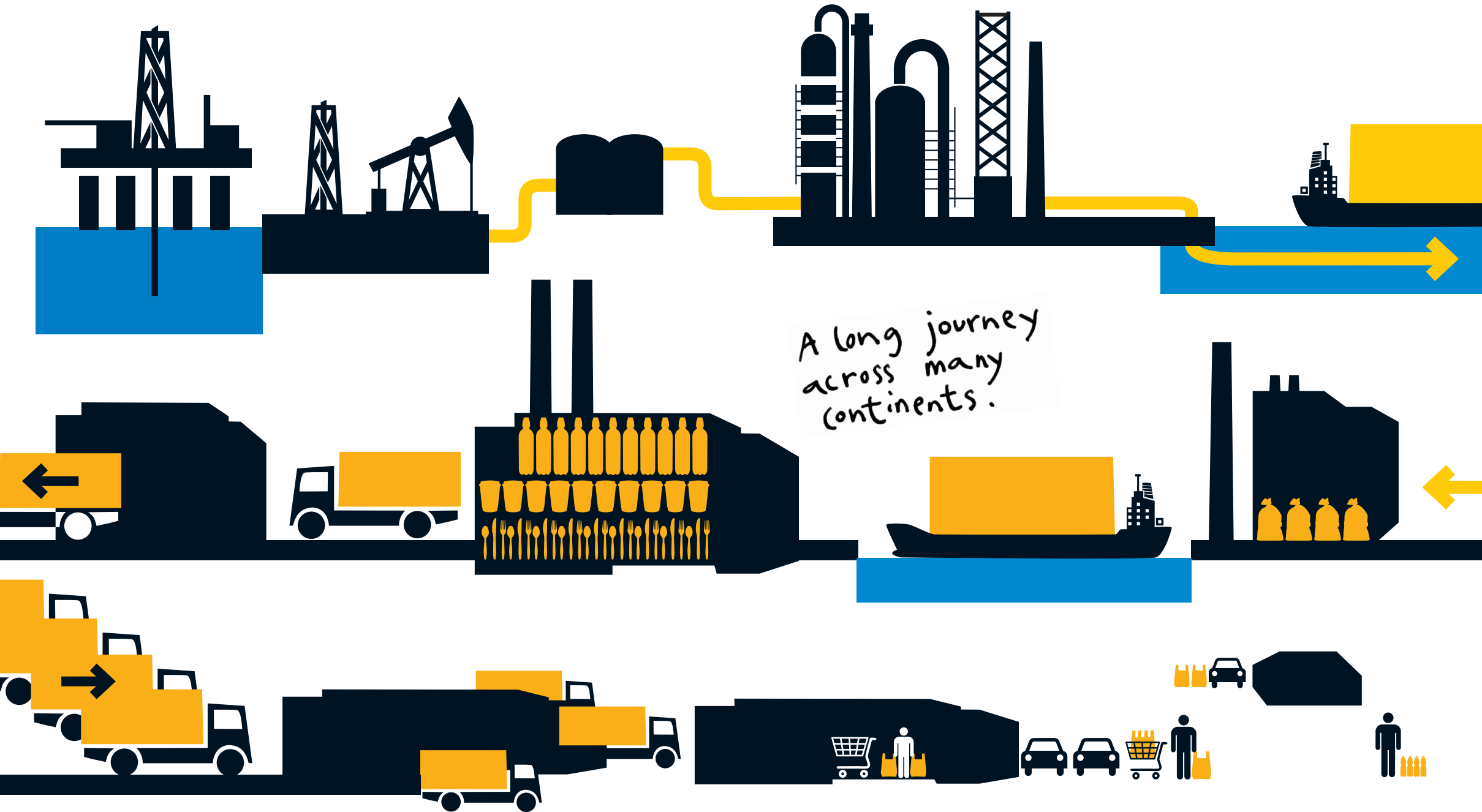
**Who made this book?** Credits

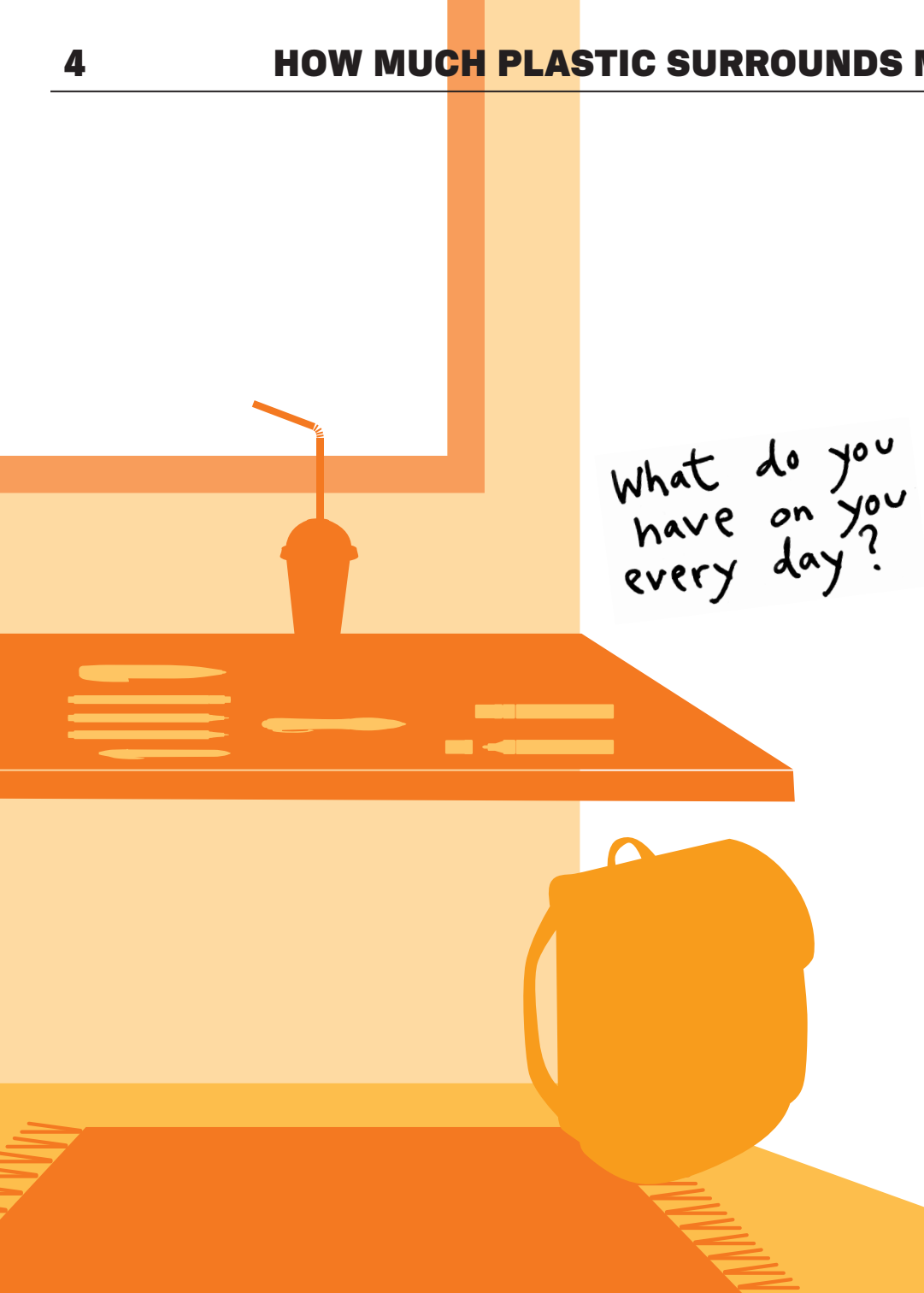




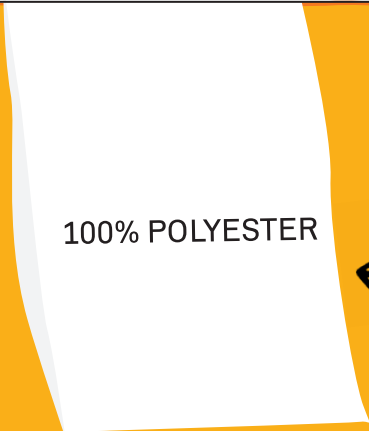












← Plastic



How often do you buy new clothes?



of our clothes contain polyester

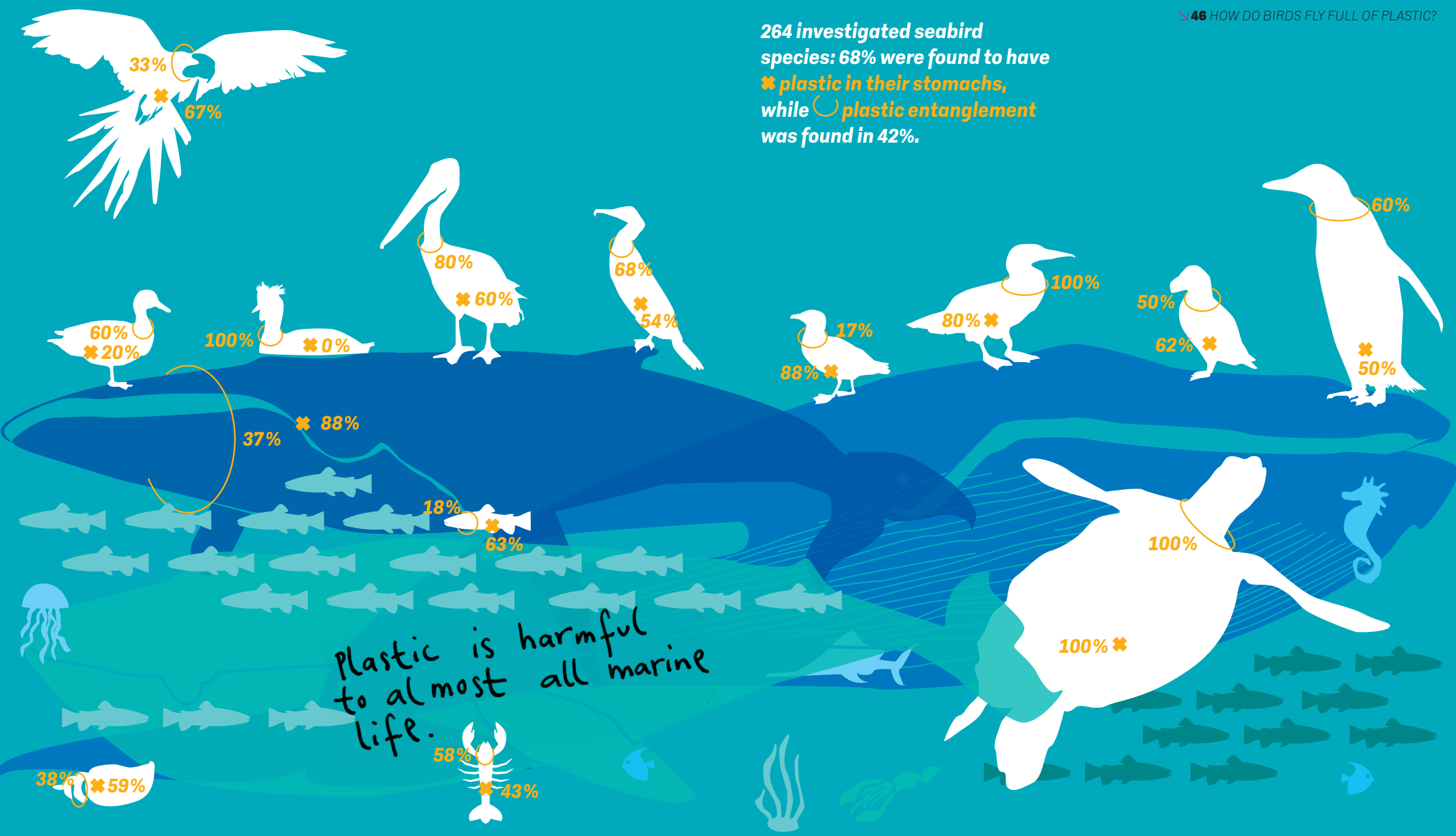


of the world's plastic production is for textiles

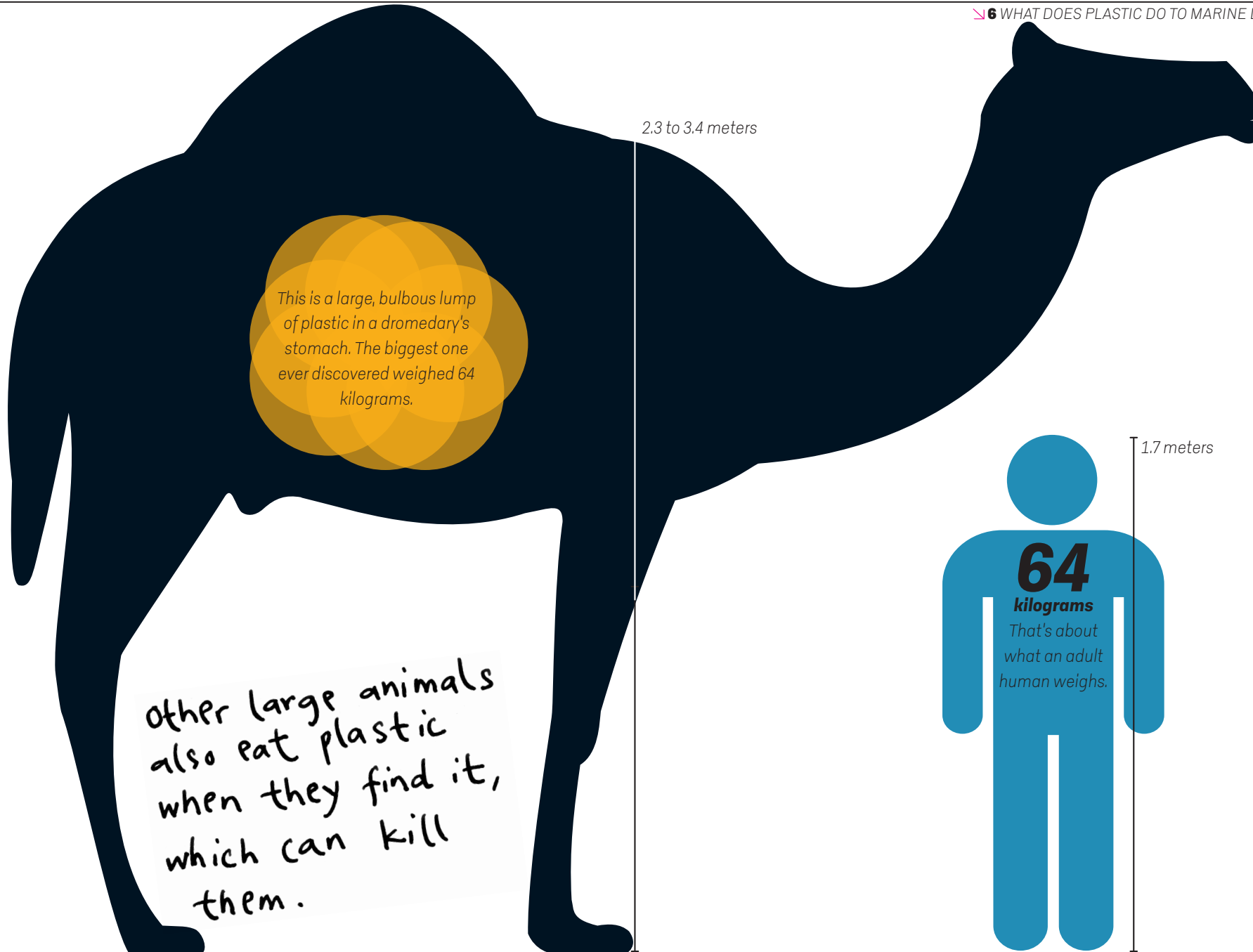
7 DOES PLASTIC ALSO KILL LAND ANIMALS? 42 HOW MUCH PLASTIC IS THERE IN THE OCEAN?

46 HOW DO BIRDS FLY FULL OF PLASTIC?

264 investigated seabird species: 68% were found to have plastic in their stomachs, while plastic entanglement was found in 42%.



Plastic is harmful to almost all marine life.





**My name's Annette and I was born in East Germany in 1960.**

When I was young, plastic was still something new and very modern. We used it sparingly – like everything else, really, as East Germany was not a wealthy country. If something broke, we repaired it. Our village had a repair shop for broken household appliances like shavers, vacuum cleaners, TVs, and even sheer tights. It didn't cost much and was always worth it.

Packaging was usually made of cardboard, paper, or glass. When we went shopping, we used fabric or string bags. Meat, fish, cheese, and even sauerkraut were bought fresh from the counter and wrapped in paper. Fruit and vegetables were packed in brown paper bags.

One time, a classmate of mine came back from Sweden and told us they collected their trash there in plastic bags before throwing them into the waste container. We could hardly believe it. Waste appetizingly presented for the trash?! At our house, waste went straight into the garbage can. After we emptied it, we rinsed it out and lined it with newspaper. Organic waste landed on the garden compost heap. There were special drums in the town where they used to collect feed for the pigs. We took metal, glass, and waste paper to the scrap dealer. This was something children did – with our handcarts and bicycles, we regularly went door to door, rang the bell, and asked for empty bottles, glasses, and old newspapers and magazines. We lugged it all to the collection point as a way of topping up our allowance.

Plastic packaging was always reused or repurposed. It was practical and fairly rare, so it would have been a shame to simply throw it away. We would rinse out the one-liter plastic milk bags and use them to carry our school lunches. My parents used empty margarine tubs as flowerpots.

On an outing, we'd take food from home or buy a sausage on a small paper plate. At events, we had drinks in bottles or returnable glasses. If the adults wanted a coffee, they'd go to a café – takeaway cups were unknown. As a young woman, I was invited to an event at the French Cultural Center in Berlin, where they served water from transparent plastic bottles in see-through plastic cups. My jaw dropped when I saw that they just threw them in the waste basket, so I sneaked one of these lovely bottles and a number of cups into my bag and took them home with me. My family was amazed and used them for a long time.

Today my parents still rinse out almost all their plastic containers and use them for things like storing food in the freezer. They also reuse all their plastic bags. I used to think it was embarrassing, but now this pair of almost ninety-years-olds have shown themselves to be fully in tune with the times. I try to follow their example, but I simply have more empty plastic containers than I could ever need.

**My name is Kofo and I was born in London in 1959.**

When I was ten, we returned to my parents' homeland, Nigeria. There was not so much plastic in England at that time either, but much less in African countries. In the 1970s there were some supermarkets, but most people in Nigeria bought their food in markets and carried it home in baskets. In the market, foodstuffs such as rice, cassava, and grains were packed in bags made of jute, a natural fiber, and food sold was often wrapped in newspaper or large leaves. Similar leaves were used to cook food in. When the sacks or baskets were worn out, they could simply be thrown away, because they were made of plant fibers that rotted quickly in a natural organic way. In the old days water was carried in containers found in nature, such as hollowed-out bottle gourds and calabashes. The calabash trees where bottle gourds grow are not as common today. I have one planted in my garden, and when I have guests, they are surprised and happy to see it. I encourage them to take the gourds and use them as water containers, but it is a lot of work to hollow them out.

Some household items are still made from natural materials, such as brooms made from the fibers of palm leaves. In the old days clothing was woven from cotton, and sometimes made from tree bark. Toys were made usually made from wood, and sometimes from recycled tin cans. People had more time to make things and cook their food.

When I was young Coca Cola was always in glass bottles. We used to collect empty bottles at home and save them for people who would come by the house, and we would also give them bundles of old newspapers. The newspapers were reused at the market to wrap fish, meat or other food. Collecting was fun for us kids because we always received a few pennies for it.

Since the 1980s, life in Nigeria has become faster. Many young people are moving to the city, wanting to earn money and live a modern life. They eat fast food and buy water in plastic bottles or in plastic sachets, which are small, square bags. In the countryside, where food and plants to make utensils were once grown, houses are now built or products are grown for export abroad and to make money. As a result, the cultivation of traditional plants is declining. Items made from natural products such as baskets and brooms are becoming more expensive, rare, or are forgotten altogether. We have copied the western lifestyle. Now it is time for us to remember our traditions, because we know how life can work well with less plastic.