

[www.nonhazcity.eu](http://www.nonhazcity.eu)

# Hazardous Substances in Plastics

Knowledge and behaviour change

14- 15 April 2021  
online workshop

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Baltic Environmental Forum

# Why NonHazCity?

Hazardous substances are in many everyday products such as cosmetics/body care, cleaning agents, toys, plastics, furniture...

- Our target substances can harm nature and human health and accumulate in our environment and are not effectively removed by wastewater treatment plants.
- NonHazCity is focusing on municipalities (municipal entities), on (small) businesses and on private households in these municipalities.
- We demonstrate how they can make an informed choice and reduce their use of products containing hazardous substances.
- Municipalities can do a lot to reduce exposure of people to hazardous substances!
- We all can do a lot ourselves!



# The approach of NonHazCity

Earlier projects pointed out as important sources for HS in Baltic Sea three main pathways:

- industrial wastewaters,
- **municipal sewage** and
- Storm water

Emitters to municipal sewage:

- ANYBODY in town:
  - Municipal entities
  - Businesses
  - Inhabitants
  - YOU

- Demonstrate possibilities for low-cost upstream source management by all urban actors instead of high technology investments into wastewater treatment plants
- Identify source of substances of concern that enter the municipal sewer
- Engage municipalities to start managing the risk at strategic level and pilot projects
- Educate SMEs how to substitute substances of concern
- Run campaigns for private households how to avoid critical substances



# Partnership of NonHazCity

## Acting in NonHazCity

21 partners from 12 cities:

- Stockholm, Västeras - Sweden
- Turku - Finland
- Pärnu - Estonia
- Riga - Latvia
- Gdansk – Poland
- Kaunas District, Silale – Lithuania
- Hamburg - Germany
- Ivey & Vilejka – Belarus
- St. Petersburg - Russia



# NonHazCity 1 & 2 – Key activities

## NonHazCity 1 (4/2016-3/2019)

- Substances of Concern were identified
- Source maps of chemicals developed
- Municipal Chemicals Action Plans
- Test measures for concrete substance reduction at municipality's own premises
- Pilot substitution actions at small businesses and improvement of their chemical assortment.
- Inhabitants campaign to show their hazardous substance emission share and tested the use of less hazardous chemicals in every-days household management.

## NonHazCity 2 (8/2019-7/2021)

- Monitoring the implementation of strategies & guidelines developed in NHC 1
- Making chemicals risk management more explicit in environmental management systems & standards
- Systematizing training of staff in public sector
- Empowering a larger amounts of private consumers & businesses to reduce their consumption of products containing HS
- **Covering the topic of plastics as vector for hazardous substances, which has gained new impetus through the EU plastics strategy and work on the circular economy**

# Our basis of evidence at NonHazCity: Hazardous Substance Screening 2016 – 2018

**Conclusions: the substances of concern are  
everywhere in town**

Water screening in several municipalities

Article tests (in laboratory) in Sweden

Urine & dust tests of volunteers/flats in Gdansk



NONHAZCITY

# NonHazCity – coupling of human health with environment quality (pollution)

Target hazardous substances:

- Bisphenol A (BPA)
- Pharmaceuticals
- Phthalates
- Metals
- Alkylphenols
- Perfluoralkyl Substances (PFAS)

Samples taken:

- Residential wastewater
- Industrial wastewaters
- Surface water
- Storm water
- Ground water
  
- Articles and materials in kindergartens (Stockholm)
  
- Urine of volunteers and dust sampled in their houses ("City on detox", GIWK)



## Samples types

- Environmental samples
- Biological samples
- Article samples
- Technological samples

# Detection Summary

| Class           | Substance    | Industrial | Residential | Service | Stormwater | WWTP |
|-----------------|--------------|------------|-------------|---------|------------|------|
| Metals          | Cadmium      | 59%        | 59%         | 85%     | 58%        | 73%  |
|                 | Lead         | 9%         | 6%          | 15%     | 17%        | 0%   |
| Organics        | Bisphenol    | 100%       | 94%         | 100%    | 90%        | 92%  |
|                 | Phthalates   | 94%        | 100%        | 86%     | 100%       | 100% |
|                 | Alkylphenols | 28%        | 59%         | 64%     | 40%        | 75%  |
| Per-fluorinated | PFOA         | 67%        | 67%         | 58%     | 50%        | 96%  |
|                 | PFBA         | 33%        | 0%          | 33%     | 6%         | 22%  |



# Snapshot Summary

| Contaminant Type          | Age of the problem | Detection Frequency | Level of Concern |
|---------------------------|--------------------|---------------------|------------------|
| Metals                    | Yesterday          | Everywhere          | Moderate         |
| Organics                  | <b>Today</b>       | Everywhere          | <b>High</b>      |
| Perfluorinated Substances | <b>Tomorrow</b>    | WWTP                | <b>High</b>      |

Bisphenol,  
Nonylphenol  
Phthalates  
.....

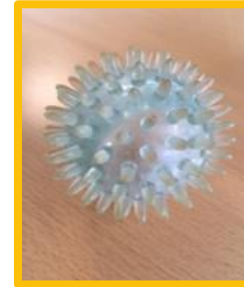


PFAS etc



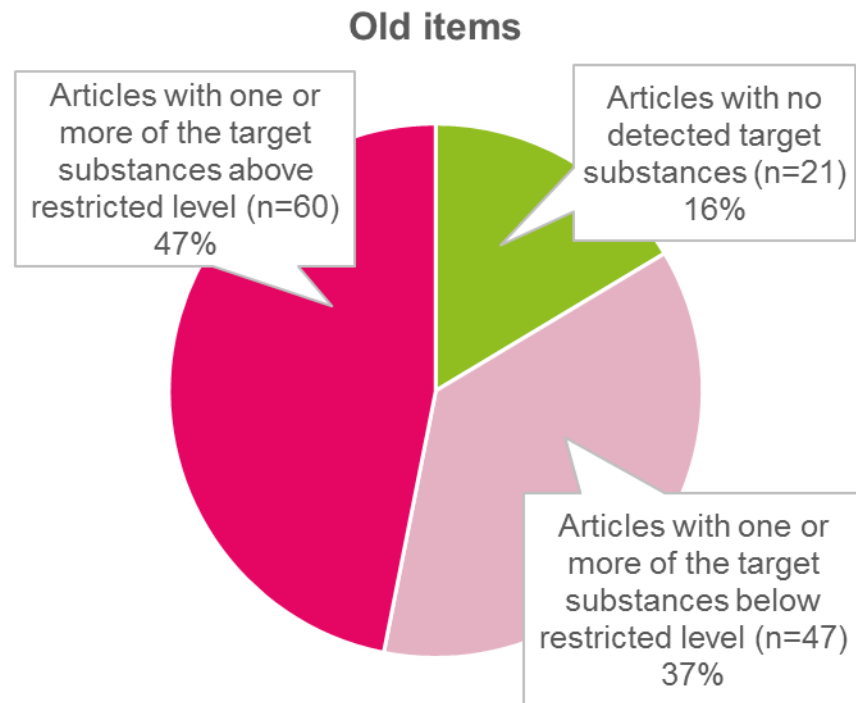
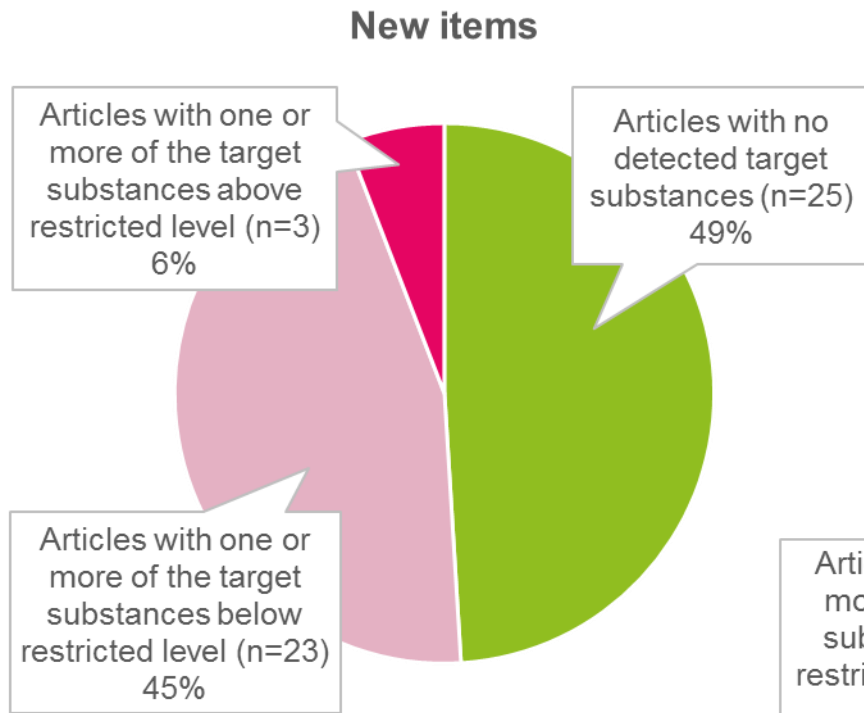
# Testine of toys and matraces in kindergartens

Old material  
sampled from  
kindergartens



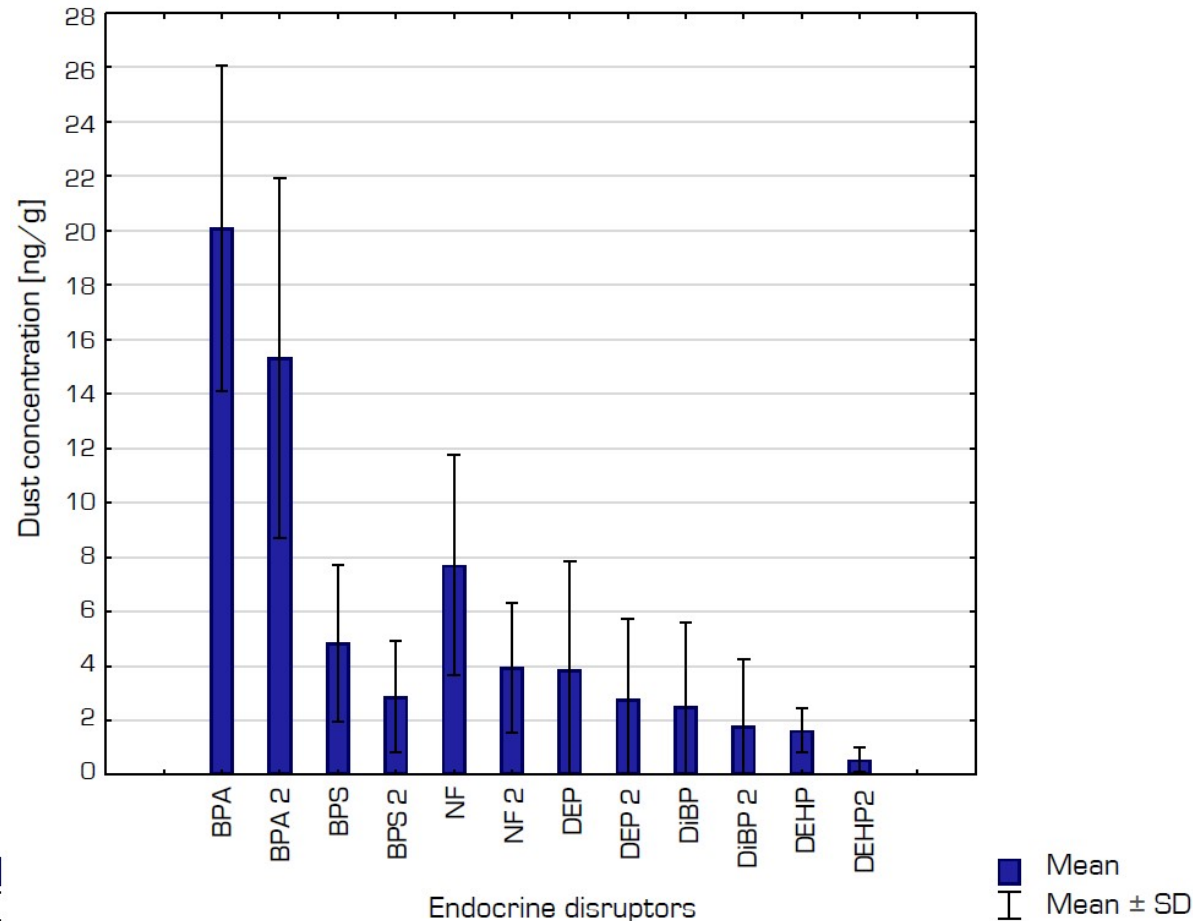
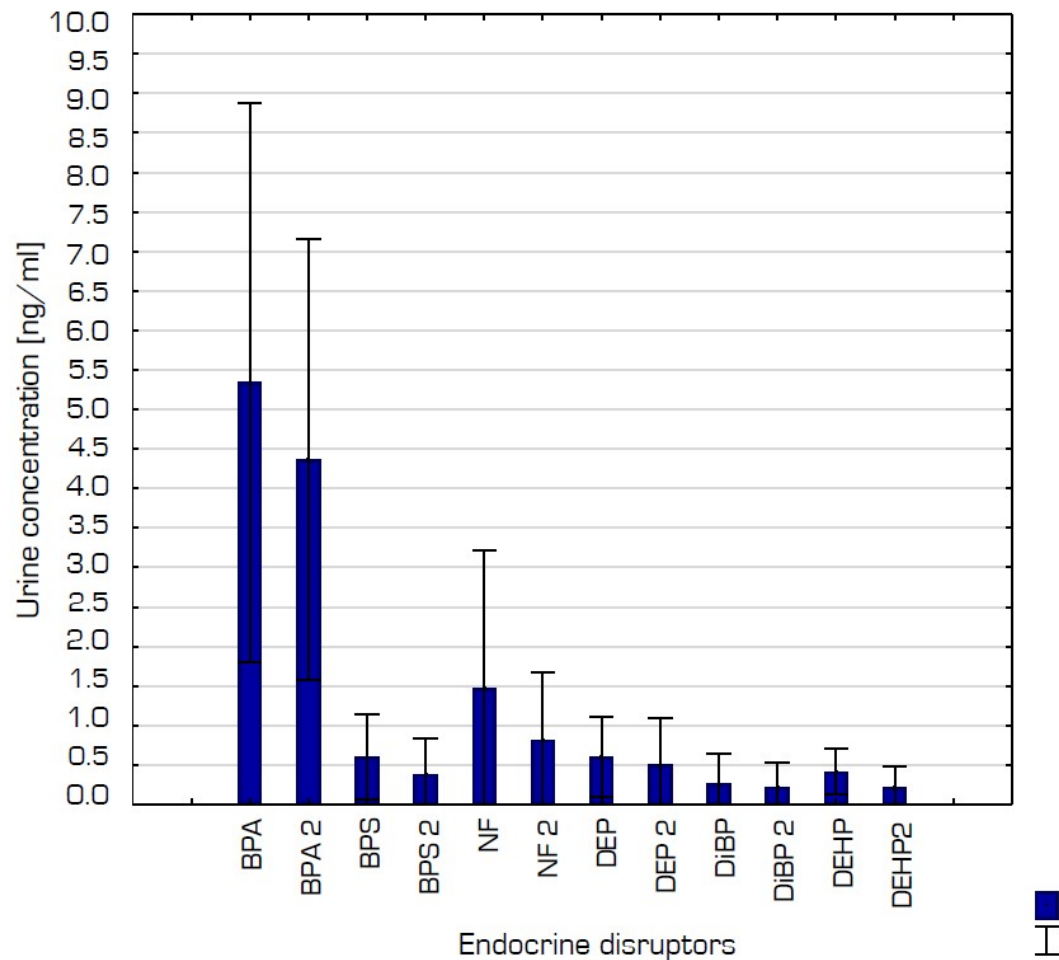
New material  
from procured  
suppliers





For the whole report, please see [www.nonhazcity.eu](http://www.nonhazcity.eu) News section in any of the categories.

# Urine and dust analyses in Nov. 2017 (repeated in June 2018) (7 families, 6 substances) – the proof in Gdańsk



# Hazardous substances in plastic

a focus of NonHazCity 2

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# Why did we take up this issue at NonHazCity?

- Plastic is a vector of Hazardous Substances
- The current debate on plastic waste – to our mind – must be carried out in line with the issue of its containing hazardous substances
- Our aim: to add the Hazardous Substance issue onto the plastic campaigns
- Therefore, we produced new information materials on plastic-HS-related issues
- We will drive a Social Media Campaign from 3<sup>rd</sup> May until 13<sup>th</sup> June
- And, we invited you all to this seminar for an intensive discussion on the importance to talk about hazardous substances when talking about plastics



# The issues of our seminar

- Plastic as a vector of hazardous substances – Plastic as source of exposure
  - The vector issue
  - Health aspects
  - Environmental aspects
- Plastics – chemicals pose a risk to circularity and climate change mitigation.
  - With examples of certain materials of common products of concern
- Making the invisible visible
  - Why is it so difficult? What behaviour we want to change? How can we motivate it?
- Communication strategies for targeting citizens, entrepreneurs and anyone in town – calling for “plastic diets”
  - Examples from campaigns from Swedish cities Västerås and Stockholm
  - Co-creation of the forthcoming NonHazCity campaign



# Good that you all are here – who are you? Let´s get a bit acquainted with each other

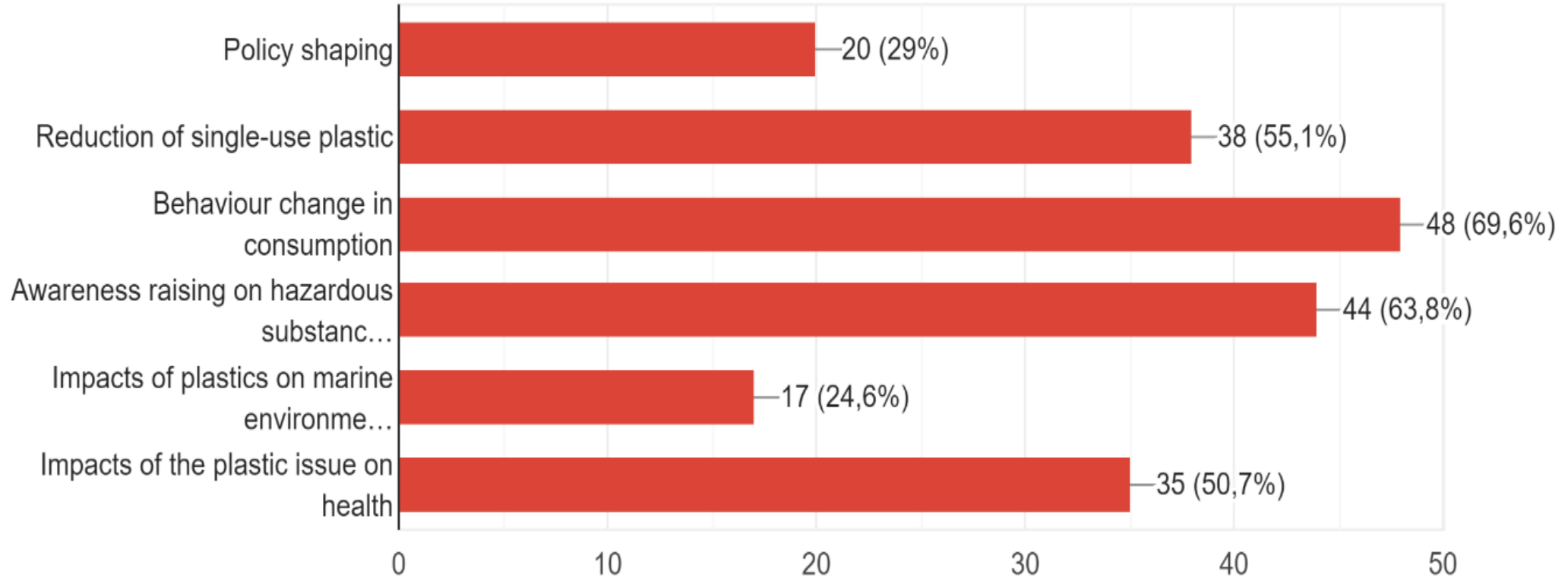
- We will do now all together a „virtual Tour de table“
- Instead of each of you speaking up, we will use the information from the registration forms which you filled and we will do an interactive communication via AHA slides
- For this you need to open the following link (at your computer or smart phone)
- <https://ahaslides.com/PLASTIC21>
- But at first I would like to show you the results of the questionnaire which you filled at registration.



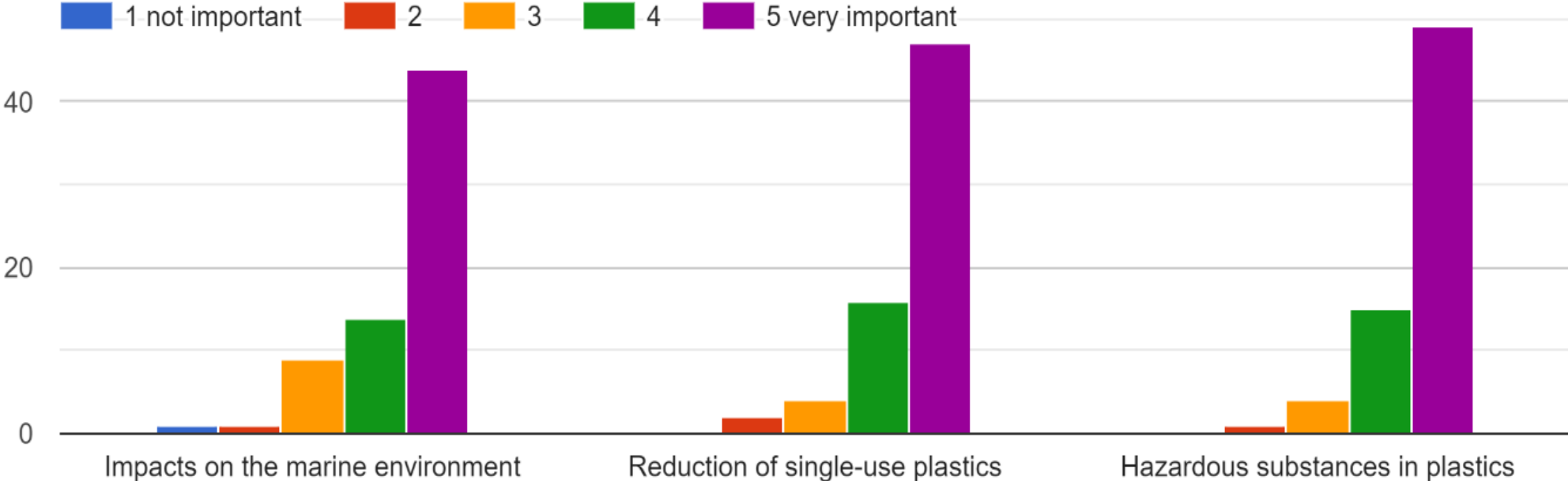


### 3. Please select three main priorities when campaigning about plastics:

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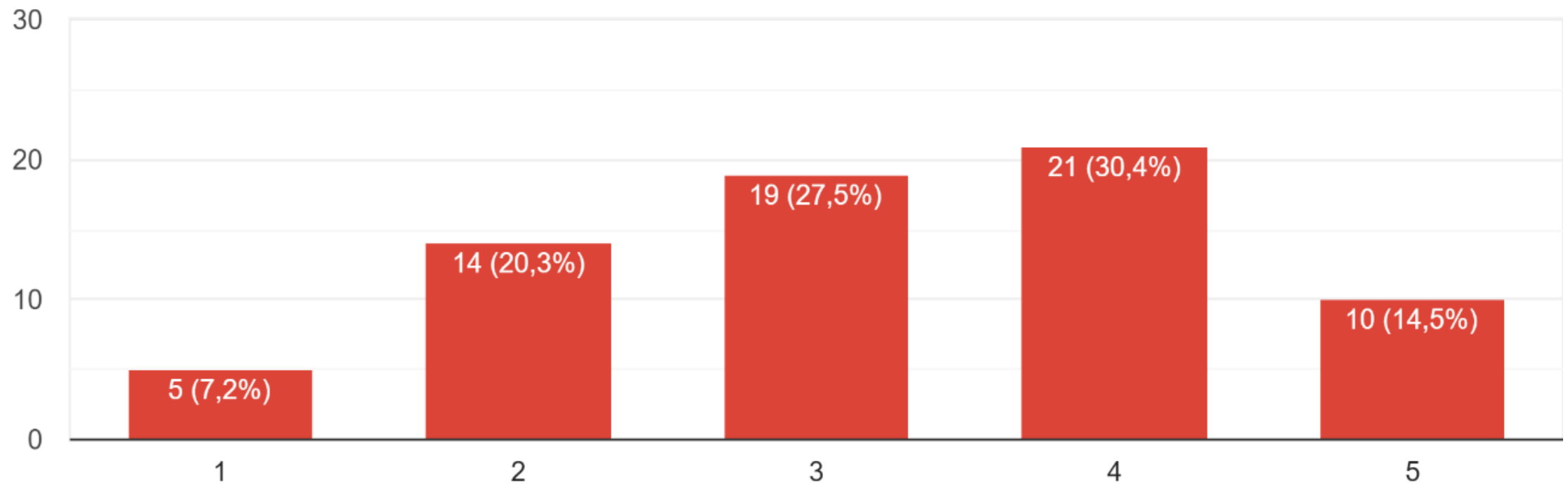


4. Rate how important are following aspects when campaigning about plastics (rate your importance in scale from 1-5 where 1 is low and 5 is great):

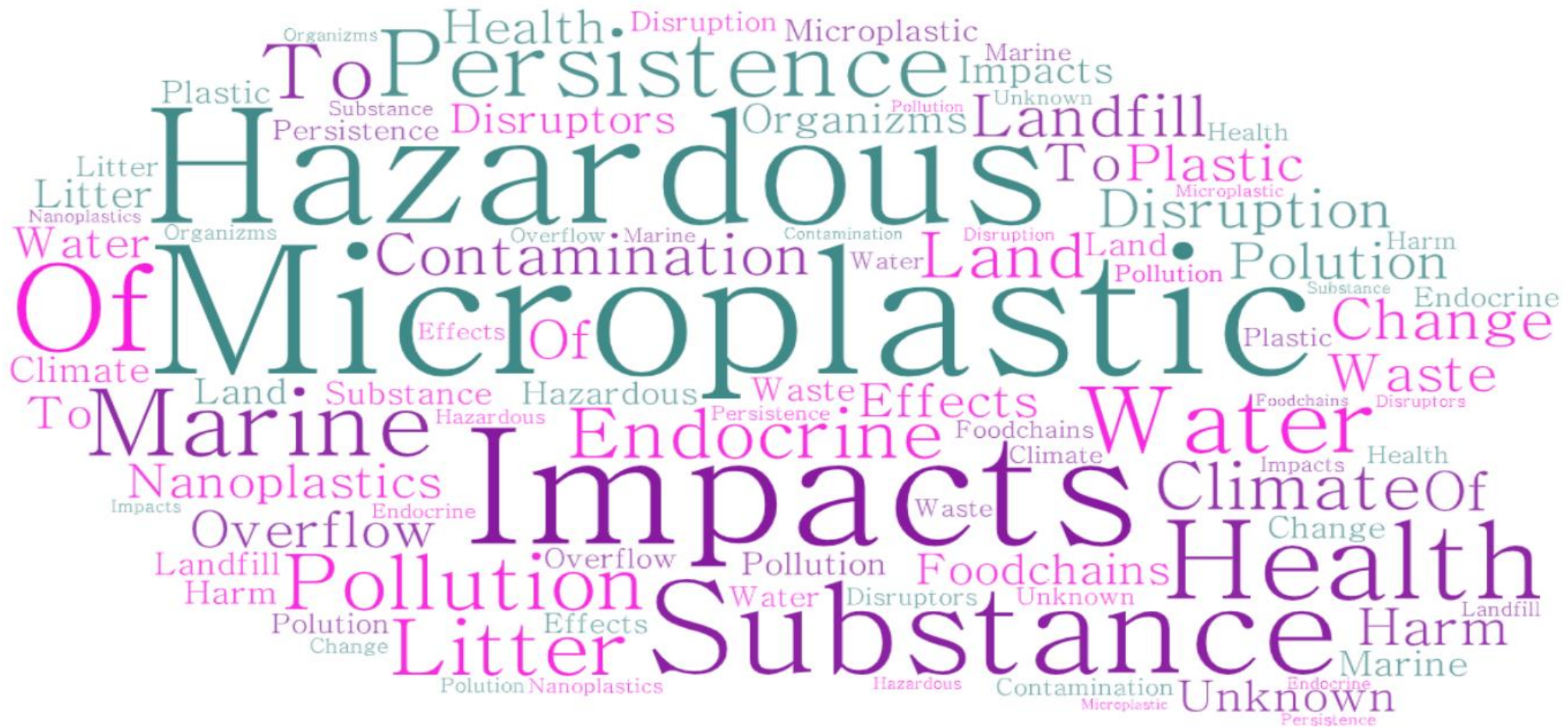


6. What is your level of knowledge on hazardous substances in plastic? (rate your knowledge in scale from 1-5 where 1 is low and 5 is great)

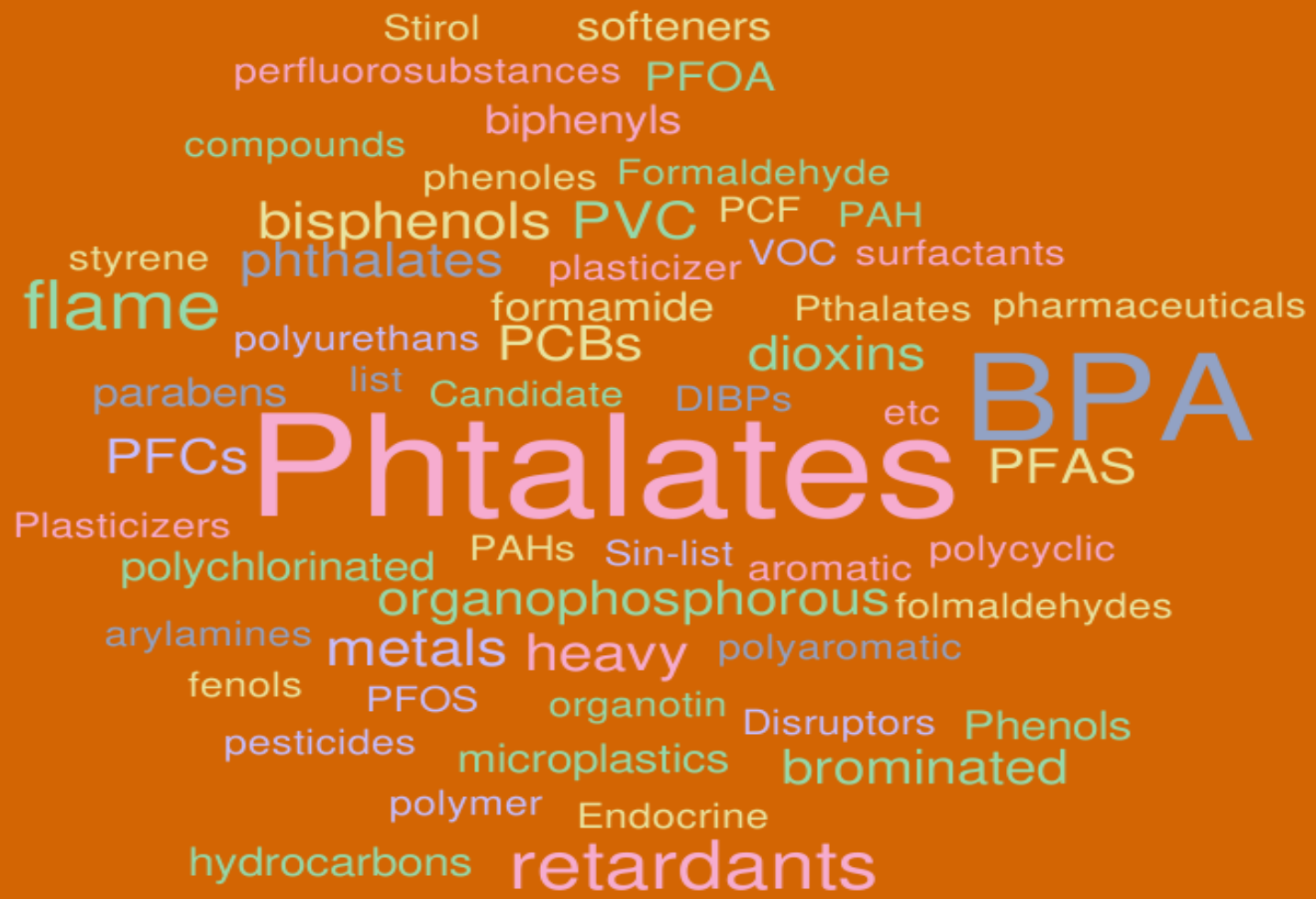
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# What is in your opinion the strongest environmental issue caused by plastics?



# What hazardous substances do you know about and what is their hazard?



And now we go to AHA slides

<https://ahaslides.com/PLASTIC21>




[www.thinkbefore.eu](http://www.thinkbefore.eu)  
[www.nonhazcity.eu](http://www.nonhazcity.eu)

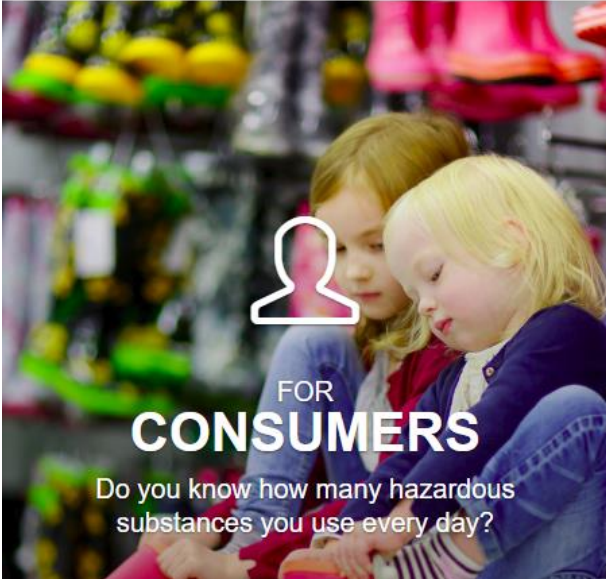
# The NonHazCity Website


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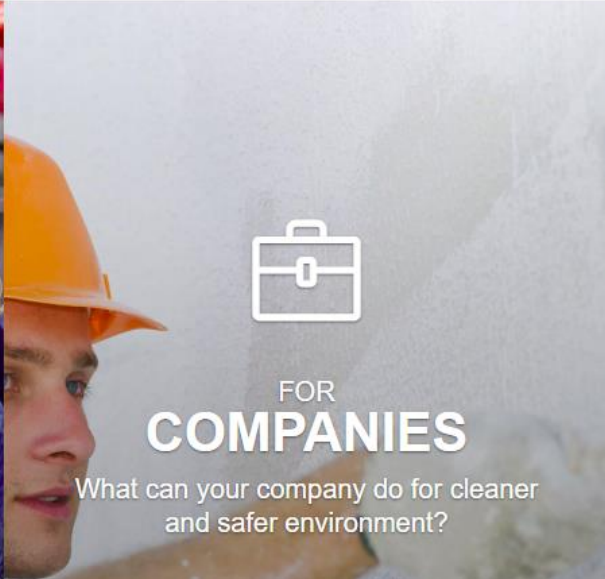
## SAFER PRODUCTS, CLEANER CITIES!


 NonHazCity


NonHazCity project wants to address the small-scale emitters directly and try to reduce the consumption of hazardous substances at the source. Municipalities, small and medium sized enterprises and private households will be addressed by various means, adapted to each specific target polluter with the main goal to prevent hazardous substances ending up in the sewer and, ultimately, in the Baltic Sea.





  
FOR  
**CONSUMERS**  
Do you know how many hazardous substances you use every day?



  
FOR  
**COMPANIES**  
What can your company do for cleaner and safer environment?



  
FOR  
**MUNICIPALITIES**  
How can municipalities reduce emissions of hazardous substances?

 EUROPEAN UNION  
EUROPEAN REGIONAL DEVELOPMENT FUND



NonHazCity Plastic Diet

## *Plastics* and the *hidden threat* to your health

Synthetic material more commonly referred to as „plastic,“ is pervasive in our lives. Indispensable items for our daily lives including food packaging, clothing, furnishings, vehicles, building materials and even replacement parts for our bodies such as prostheses and tooth fillings are made of plastic.

JOIN OUR PLASTIC DIET



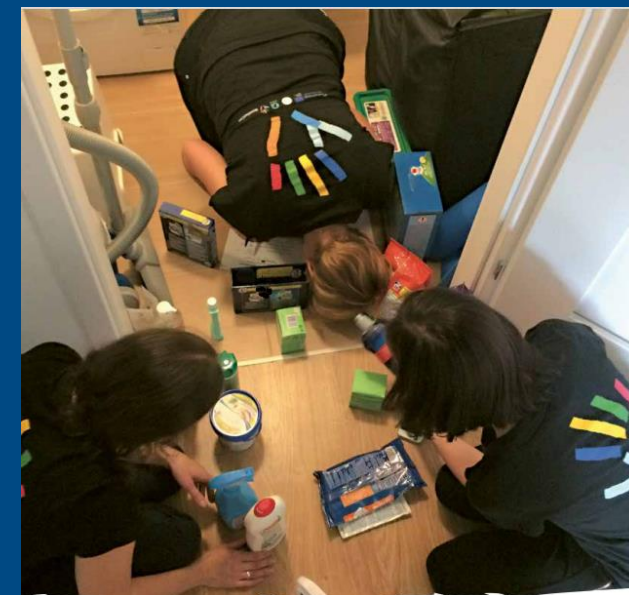
In cooperation with hopefully all of you!





you can detox your household with help  
of this guide

[BEF DIY Guidebook ENG.pdf](#)  
[\(thinkbefore.eu\)](#)



DIY GUIDEBOOK:  
DETOX YOUR HOME



# Check your exposure: <https://checked.detoxed.eu/>

## Endocrine Disruptors (EDs) exposure analyzer



### 5 fingers like 5 reasons to live a DetoxED lifestyle

(DetoxED – free of Endocrine Disruptors – hormonal cheaters that increase the risk of lifestyle diseases: obesity, infertility and cancers)

1. **Knowledge.** Endocrine Disruptors are harmful, yet common in daily life. ([read more](#))
2. **Care.** Protect your health. ([read more](#))
3. **Nature.** Protect the Earth. ([read more](#))
4. **Economy.** Save money. ([read more](#))
5. **Attitude.** Being DetoxED is easier than you think!

[Take a step now - start here](#)



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