Report

Agreement 17-3063-1

between the CCB Secretariat and PKE OWP for the CCB/EU/Postkodstiftelsen supported Plastic Free Baltic Project (CCB Action B1.7) within the fiscal year 2017

Under the agreement 5 specific tasks were undertaken.

1.1.1. Updating the PCCP national list

The following tasks have been carried out for the "Plastic Free Baltic" campaign related to informing consumers on social networks about harmful use of MP in cosmetics for the human body and the presence of MP and their impact on the environment. Also on portals like Facebook and Twitter is presented a list with the names of MP which consumers should beware of while shopping for cosmetics cosmetics, as well as commonly used composition cosmetics on the market, through infographics. In addition, consumers were informed about producers of microplastic -free cosmetics. The infographics present companies that do not use MP, namely: YVES ROCHER, Be organic, Bebe, Head & Shoulders, Pat and Rub, Shaumma, Botanicals. Also using map graphics of The Tri-City and the Pomeranian Voivodship there are outlined 34 ecological cosmetic stores in which it is worth to purchase cosmetics free from MP. On the other hand, on social networks, readers are given recipes for natural cosmetics, that you can do yourself at home.

The Polish list of cosmetics with MP is presented on **EkoAgora.pl**

A letter was also created for cosmetic manufacturers who use microplastics in their production of cosmetics through the call to stop using microgranules for the benefit of consumers and the environment. The letter with the appeal was sent out to all producers via e-mail and placed for consumer messages on social networks.

CZY WIESZ Z CZEGO SKŁADA SIĘ TWÓJ KOSMETYK?

SKŁAD PODKŁADU:

AQUA/WATER, CYCLOPENTASILOXANE, **PROPYLENE GLYCOL**, **DIMENTHICONE**, ALUMINUM STARCH OCTENYLSUCCINATE, **TALC**, **PEG/PPG-18/18 DIMENTHICONE**, SODIUM CHLORIDE, PVP, LAURETH-7, TRIHYDROXYSTEARIN, BIS-ETHYLHEXYL HYDROXYDIMETHOXY BENZYLMALONATE, ARACHIDYL BEHENATE, TITANIUM DIOXIDE (NANO), SILICA, POLYGLYCERYL-4 ISOSTEARATE, CAPRYLYL METHICONE, PEG/PPG-18/18 DIMETHICONE, HDI/TRIMETHYLOL HEXYLLACTONE CROSSPOLYMER, ETHYLENE/METHACRYLATE COPOLYMER, SYNTHETIC WAX, ETHYLENE/VA COPOLYMER, **POLYETHYLENE**, ALUMINUM HYDROXIDE, STEARIC ACID, ISOPROPYL TITANIUM TRIISOSTEARATE, SODIUM DEHYDROACETATE, **METHYLPARABEN**, **PROPYLPARABEN**

Stosowany jako rozpuszczalnik, działa rakotwórczo, wysusza i podrażnia naskórek, powoduje świąd i alergiczne zapalenie skóry

Podrażnia skórę, zaostrza objawy trądziku

Właściwości fizykochemiczne są odpowiedzialne za powstawanie nowotworów; Zaburza oddychanie i czynności wydzielcze skóry

Zatyka pory w skórze

MIKROPLASTIK!

Stosowany na skórę, może reagować z UVB i powodować szybsze jej starzenie się

Wywołuje zaburzenia endokrynologiczne, alergiczne

SKŁAD MLECZKA DO CIAŁA:

AQUA/WATER, **PETROLATUM**, GLYCERIN, **PARAFFINUM LIQUIDUM/MINERAL OIL**, CETEARYL ALCOHOL, **DIMETHICONE**, BUTYROSPERMUM PARKII BUTTER/SHEA BUTTER, ARGANIA SPINOSA OIL/ARGANIA SPINOSA KERNEL OIL, CAPRYLYL GLYCOL, CARBOMER, CI 14700/RED 4, CI 19140/YELLOW 5, GLYCERYL STEARATE, MACADAMIA TERNIFOLIA SEED OIL, PALMITIC ACID, **PEG-100 STEARATE**, **PHENOXYETHANOL**, PRUNUS AMYGDALUS DULCIS OIL/SWEET ALMOND OIL, ROSA RUBIGINOSA SEED OIL, SODIUM HYDROXIDE, STEARIC ACID, TOCOPHEROL, PARFUM/ **FRAGRANCE**

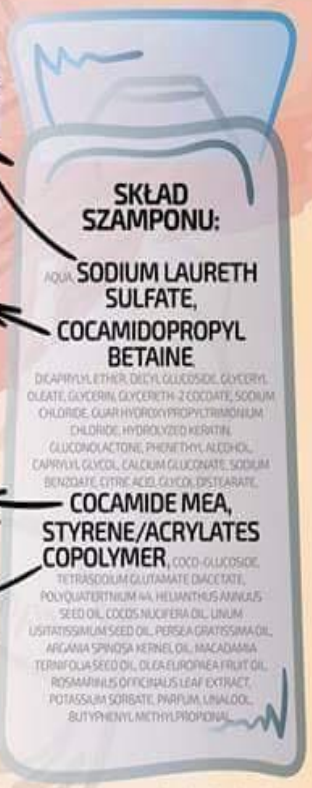
Produkty destylacji ropy naftowej - zatykają pory, absorbują kurz i bakterie, przyspieszają proces starzenia

Podrażnia skórę, zaostrza objawy trądziku

Zatyka pory w skórze, powoduje pokrzywkę, świąd; Zanieczyszczony dioksanem (1,4 dioxane) jest rakotwórczy

Wywołuje wypryski i pokrzywkę na skórze

Składniki zapachowe: poprawiające koloryt kosmetyków; Często substancje silnie uczulające, rakotwórcze



SKŁAD SZAMPONU:

AQUA/WATER, **SODIUM LAURETH SULFATE**, **COCAMIDOPROPYL BETAINE**, DICAPRYLYL ETHER, DECYL GLUCOSIDE, GLYCERYL OLEATE, GLYCERIN, GLYCERETH-2 COCOATE, SODIUM CHLORIDE, GUAR HYDROXYPROPYLTRIMONIUM CHLORIDE, HYDROLYZED KERATIN, GLUCONOLACTONE, PHENETHYL ALCOHOL, CAPRYLYL GLYCOL, CALCIUM GLUCONATE, SODIUM BENZOATE, CITRIC ACID, GLYCOL DISTEARATE, **COCAMIDE MEA**, **STYRENE/ACRYLATES COPOLYMER**, COCO-GLUCOSIDE, TETRASODIUM GLUTAMATE DIACETATE, POLYQUATERNIUM-44, HELIANTHUS ANNUUS SEED OIL, COCOS NUCIFERA OIL, LINUM USITATISSIMUM SEED OIL, PERSEA GRATISSIMA OIL, ARGANIA SPINOSA KERNEL OIL, MACADAMIA TERNIFOLIA SEED OIL, OLEA EUROPAEA FRUIT OIL, ROSMARINUS OFFICINALIS LEAF EXTRACT, POTASSIUM SORBATE, PARFUM, LINALOOL, BUTYLPHENYL METHYLPROPIONAL

Przesusza skórę, wywołuje świąd i wysypkę

W połączeniu z SLS powoduje przesuszenie skóry, łupież, wysypki na skórze i alergiczne zapalenie skóry

Ze związkami azotowymi tworzą substancje rakotwórcze; Drażni błony śluzowe i skórę wywołując świąd i pokrzywkę

MIKROPLASTIK!

ZAWSZE SPRAWDZAJ SKŁAD ZANIM KUPISZ PRODUKT DO PIELĘGNACJI!

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Na potrzeby projektu: **Plastic Free Baltic**
Źródło: lusklewnik.strefa.pl/acne/toksyny

KOSMETYKI WOLNE OD MIKROPLASTIKU:

Plastic Free Baltic


CHYLONIA
8
19
7
Gdynia
15
10
18
11
WITOMINO
468
20
6
9
474
ORŁOWO
12
2
WIELKI KACK
20
468
13
20
Chwaszczyno
E28
Sopot
JELITKOWO
218
OSOWA
PRZYMORZE
OLIWA
5
NOWY PORT
468
ZASPA
4
16
89
Rębiechowo
14
3
91
MATARNIA
Droga Wojewódzka 472
WRZESZCZ
ANIOŁKI
17
E28
PIECKI-MIGOWO
7
Gdańsk
Leźno
501
501
1
7
89

The Pomeranian Voivodship – ecological cosmetic stores

Zobacz, gdzie możesz kupić NATURALNE KOSMETYKI BEZ MIKROPLASTIKÓW !!

Wybierz sklep przyjazny środowisku najbliżej siebie i kupuj odpowiedzialnie

Polecamy producentów tworzących w zgodzie z naturą!

Wykaz sklepów:

1. Bio Ika, ul. Cieszyńskiego 36-38, 80-809 Gdańsk
2. BioSklep Sklep ekologiczny, ul. Miętowa 3, 81-589 Gdynia
3. L'OCCITANE, Al. Grunwaldzka 141, 80-236 Gdańsk
4. Zielonyspichlerz.pl – Zdrowa i Ekologiczna Żywność, kosmetyki ekologiczne, ul. Chrzanowskiego 38A, 80-300 Gdańsk
5. F.H.U. HONEY Hanna Kotowska, ul. Paderewskiego 6, 84-200 Rumia
6. Eko Aleja – eko żywność i kosmetyki, ul. Jana Pawła II 5/3, 80-462 Gdańsk
7. Eko Aleja – eko żywność i kosmetyki, ul. Bytomska 22, 81-509 Gdynia
8. EKO Sklepik A&K, ul. Radtkego 29/35, 81-355 Gdynia
9. Zakręcony Słoik, ul. Karpińskiego 2/3, 81-173 Gdynia
10. BioArea – kosmetyki naturalne, Pl. Górnośląski 1, 81-509 Gdynia
11. iNaturalnie, ul. Śląska 57, 81-304 Gdynia
12. Skrzydła Natury, ul. Wyspiańskiego 17, 81-402 Gdynia
13. Ekorytm – sklep z kosmetykami naturalnymi, ul. Klasztorna 10, 84-200 Wejherowo
14. Manufaktura Naturalis, ul. Handlowa 9a/61-62, 84-300 Lębork
15. Leki Natury, ul. Wschodnia 10F, 82-500 Kwidzyn
16. Leki Natury, ul. Kopernika 25c/3, 82-500 Kwidzyn
17. Alchemonja Artist, ul. Jana Pawła II 7, 84-342 Bytów
18. Naturalny Koszyk, ul. Makowa 10, 83-010 Straszyn
19. EkoDelikatesty, ul. Powstańców Warszawy 15a/6, 83-000 Pruszcz Gdański
20. Gaja Sklep Ekologiczny, ul. Staszica 14, 76-200 Słupsk
21. Sklep Zielarski Krzysztof Wesołowski, ul. 14 lutego 24B, 89-600 Chojnice
22. FIRMED Paweł Chełmecki Witalnie.com.pl, ul. Inżynierska 52A, 81-512 Gdynia
23. Mydlarnia u Franciszka, Bohaterów Monte Cassino 10, 81-805 Sopot
24. Mydlarnia u Franciszka, Aleja Grunwaldzka 99-101, 80-244 Gdańsk
25. Mydlarnia u Franciszka, Generała Józefa Hallera 2, 83-250 Starogard Gdański
26. Mydlarnia u Franciszka, Rzemieślnicza 5, 83-400 Kościerzyna
27. Mydlarnia u Franciszka, Żwirki i Wigury 7, 81-382 Gdynia
28. Organique, al. Grunwaldzka 14, 80-264 Gdańsk
29. Organique, ul. Rajska 10, 80-850 Gdańsk
30. Organique, Kazimierza Górskiego 2, 81-304 Gdynia
31. Organique, ul. 10-lutego 11, 81-366 Gdynia
32. Organique, al. Zwycięstwa 256, 81-525 Gdynia
33. Organique, ul. Sobieskiego 11 A, 84-230 Rumia
34. Organique, ul. 12-go Marca 218, 84-200 Wejherowo

#PlasticFreeBaltic #PFB2017 #noplastic #kupujodpowiedzialnie #BioIka#BioSklep #LOCCITANE #Zielonyspichlerz #HONEY #EkoAleja#EKOSklepikA&K #ZakręconySłoik #BioArea #iNaturalnie #SkrzydłaNatur

1.5 Translating 3 – 5 awareness raising videos into Polish

Polish translations were added to presented on YouTube films:

1. The Story of Microfibers: www.youtube.com/watch?v=BqkekY5t7KY&t=2s
2. Ocean Confetti!: www.youtube.com/timedtext_editor?action_mde_edit_form=1&v=qVoFeELi_vQ&lang=pl&bl=vmp&ui=hd&ref=player&tab=captions&captions-r=1&metadata-r=1
3. How Much Plastic is in the Ocean?: www.youtube.com/timedtext_editor?action_mde_edit_form=1&v=YFZS3Vh4lfI&lang=pl&bl=csps&ui=sub&ref=hub&tab=captions
4. The Story of Microbeads,
5. From threat into thread,
6. Preventing Our Oceans from Becoming Dumps.

1.6.1 Developing an on-line course in English, translation into Polish : How to address ML problem from civil society perspective.

Lectures:

1. General information on ML and MP; sources; types, chemicals. Impact ML and MP on the environment, biodiversity, food chain
2. ML management, regulations, national and international policies
3. Possibilities of MP removal from sewage and waters
4. Health impact of plastics
5. Substitute materials to plastics in cosmetics and pharmaceuticals
6. Ways to stop ML and MP in seas and oceans, actions, consumption patterns
7. Waste source separation

Components of e-learning training:

- 1 minute video by the lecturer – simply to introduce themselves.
- 10 page written lecture to read
- Additional materials chosen by the lecturer
- Condensed information around the topic in a form of video, cartoon, film, infographic, ppt
- Self – control test
- Homework- as practical as possible






Participants – total 98

Kraj	Liczba uczestników
Polska/PL	43
Litwa /LT	4
Iran	1
Dania/Denmark	2
Estonia	3
Wielka Brytania/Great Britain	1
Nigeria	1
Brazylia/Brazil	1
Rosja/Russian Federation	3
Indie	1
Szwecja/Sweden	1
Undefined	37

Answers to the tests :

Test PFB - PL	**Results**
Test 1	8,95
Test 2	9,58
Test 3	9,78
Test 4	10,00
Test 5	10,00
Test 6	9,70
Test 7	9,39

Test PFB - EN	**Results**
Test 1	9,44
Test 2	----------
Test 3	8,52
Test 4	10,00
Test 5	10,00
Test 6	9,52
Test 7	10,00

In total 20 participants answered to the rules (75 % correct answers) and got certificates.

National coordinators :

LT	Indre Ceidaite	indre.c@glis.lt
DE	Marijana Toben	marijana.toben@bund.net
RU	Maria Suma	greenmap@ecoidea.by

Statistics : The online course was viewed 2381 times, unique viewers – 628.

The course is now open without registration on **ekoagora.pl** as educational material.

2.1 Develop and test a methodology for public monitoring to quantify ML pollution in rivers
2.1.2 Riverine Litter Monitoring Actions

1. *Location of sampling sites*

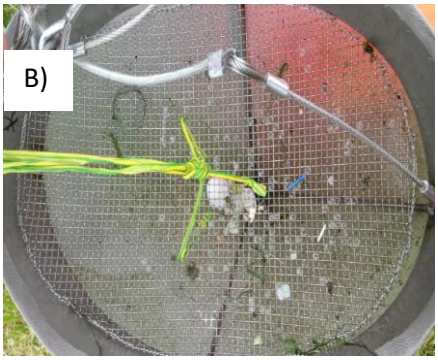
11 sampling sites were designated in order to determine the participation of the Vistula River and sewage treatment plants in discharged of microplastics to the Baltic Sea. The chosen places are presented at Fig.1 . There were effluents from municipal wastewater treatment plants (MWWTP "Wschód" in Gdańsk with the capacity of 120 000 m^3/d and 860 000 population equivalent (PE), MWWTP "Dębogórze" in Gdynia with 55.000 m^3/d and 470.000 PE, and Swarzewo MWWTP with 14 000 m^3/d and 130 000 EP), water intake from the Nogat and the Szarpawa Rivers, water intake in the shore and from the mainstream of the Vistula River and the rainwater.

The samples have been taken once a month from June to December 2017. The volume of each sample was 200 L filtered by steel grids with three dimensions of mesh:

- 5.0 mm x 5.0 mm
- 0.3 mm x 0.3 mm
- 0.026 mm x 0.026 mm

A)

B)



C)

Figure 1. A) Sampling places marked on the map of the Pomeranian Voivodeship B) macroplastics on a grid with the meshes with dimension of 5.0 mm. The sample was 200 L of effluents from Municipal Wastewater Treatment Plant "Wschód" in Gdańsk and C)sampling device

2. *Methodology of sampling*

The volume of each sample was 200 L and it was determined by a flow meter attached to the sampling device (Fig. 1C). Samples were transported to the laboratory, where they were chemically treated. The labile organic matter within each sieve sample was digested using 30% hydrogen peroxide with an iron (II), otherwise known as Fenton's reagent. Plastic debris is considered to be resistant to this wet peroxide oxidation (WPO) processing. This step was necessary due to remove the organic matter found in a significant amount in the collected

materials. After processing, samples were filtered and all remaining particulates were transferred to glass Petri dishes using deionized water (DI) for visual analysis. Using microscope, all microplastic particles were removed, enumerated and categorized as fragment, pellet, line/fiber, film, or foam. The collected material was evaluated for shape, size and color. Additionally the density analysis was carried out.
The results were analyzed by Kruskal-Wallis Test. Using the Kruskal-Wallis Test, we can decide whether the population distributions are identical without assuming them to follow the normal distribution.

3. *Results*

In all studied samples independently of type of studied water, the microplastics were mainly found as fibers (97%). This indicated that the washing clothes is the significant source of microplastics in the Vistula River, and after that in the Baltic Sea. The small pieces with irregular shapes were recognized as fragments of disposable plastic bags used commonly in markets and shops (3%).
The Vistula River carries with it a greater load of microplastics, than its outflows (the Nogat and the Szkarpawa Rivers). Moreover, water flowing along the edge of the riverbed accumulates a greater number of microplastics, than faster flowing water in the middle of the stream.

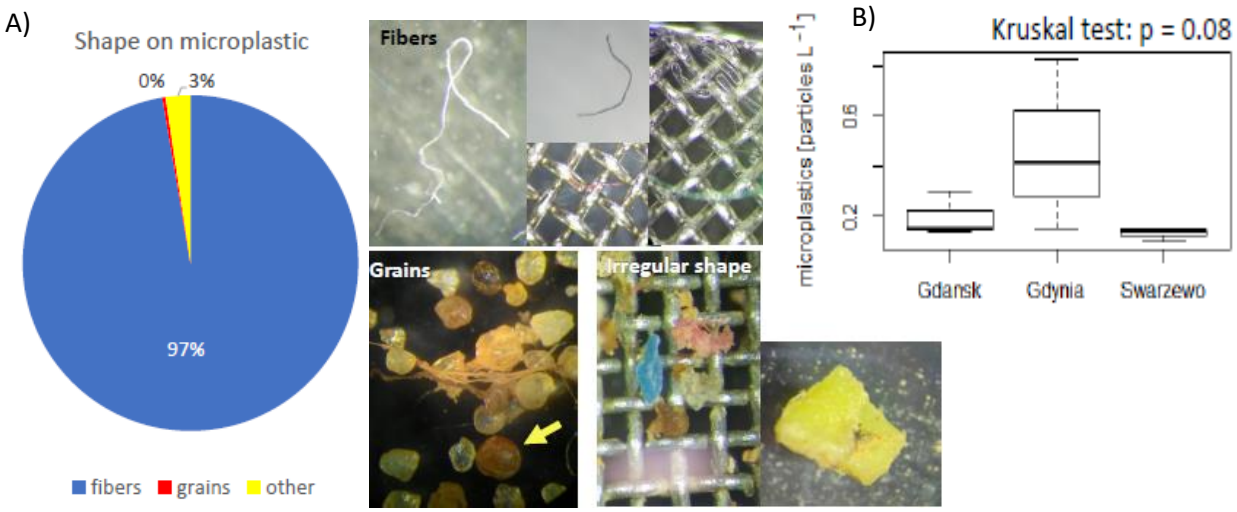


Fig. 2. The shapes of microplastics in the samples: the percentage share, photos A) and amount of microplastics in municipal wastewater treatment plants (MWWTPs) B).

The amount of microplastics in effluents from studied MWWTPs (in Gdańsk, Gdynia and Swarzewo) is ten times smaller than in the Vistula River. This fact suggested that MWWTPs are effective in the removal of microplastics. However the Vistula River flows through many large cities in Poland and collects urban and industrial wastewater, which, although they contain a small amount of microplastics, cause a continuous increase in their concentration in its waters. In the lower course of the river, the concentration is the sum of all microplastics discharged to it.

4. *Conclusions*

The Vistula River collects the microplastics from the area about 183 000 km^2, which is approx. 59% of the Poland country's area. Many big cities in Poland are located along the Vistula River. It is the reason that its waters are the main source of microplastics in Baltic Sea.

Municipal sewage treatment plants in Poland effectively removes microplastics, so its concentration in effluents is 10 times smaller than in studied rivers. In our study we observed the accumulation of microplastics near river shore of the Vistula River comparing to its mainstream, while in rainwater microplastics were absent.
The further study along the Vistula River may allow to confirm the hypothesis about adding up the amount of microplastics in low course of the Vistula River discharged from sewage treatment plants or recognize other sources of microplastics discharged into the Vistula River, which is also likely .

4.1.4 Communication and outreach

Promotional materials were disseminated mainly during meetings, events, conferences: : Piknik „Bioróżnorodność – poznaj by zachować" in Gdańsk (20.05.2017), „European Youth Conference" in Gdańsk(23-27.07.2017), „Public Advisory River Team Nemunas" in Kaliningrad (27-28.10.2017), Pikniku Przyrodników in Sobieszewo, workhop „Our Common Baltic „ in Hel, through Koło Oceanografów UG.
2 emails inviting to the course, 134 recipients of email promoting the course (PKE branches, media, administration, teachers, students)

It was assumed, during the creation by the coordinators, of a plan for year-round operation that an essential element of the project beyond its most important substantive value is a coherent and consistent information campaign reaching different and broad recipient groups. Its important element, outside the course, was visual identification. To get an interesting and encouraging graphic design, cooperation with artists has been started. The first design element was the logo of the project, referring in shape and color to the subject. Placed on all the letters and materials, it allowed for a clear identification of the project. Then, we started to develop a coherent promotional campaign for both the project and the problem of microplastics.

In order to promote the course, special invitations were designed informing about the course assumptions and encouraging to take part in it and become acquainted with the problem of microplastics. Pocket card was designed in a similar style. The idea of a pocket card, in a pocket or wallet format, containing basic information about harmful substances found in cosmetics that should be avoided. Other information elements were files and wooden clipboards. Folders for documents, in A5 format, made of cardboard made of 95% recycled paper, perfectly fit even in a woman's handbag and designed to eliminate plastic . Wooden clipboards, in A5 format, facilitate listing even in the field and successfully replacing these plastic ones. All elements included both the logo of the project and the logo of the institutions financing it, burnt with a laser so as not to use paints containing plastic.

Leaflets promoting the training went to various institutions in the Pomeranian Voivodship. To reach wide audience, they were also left in many public places such as beauty salons, hairdressing salons, libraries ... Pocket card was distributed during numerous outdoor workshops addressed mainly to the inhabitants of the Pomeranian Voivodeship and tourists.

Folders and clipboards were sent to active participants of the training, representatives of environmentally important institutions, people exceptionally interested in avoiding plastics. Every effort was made to ensure that all promotional materials did not contain plastic and were made mainly from recycled and natural materials (eg birch plywood).
The element to promote the website on which the training is located are magnetic bookmarks.

Another important action of the campaign were animations that visualized the most important issues of each of the training lectures. The developers wanted to make it easier to visualize and remembering and understanding the essence of the microplastic problem occurring in many areas of life. In addition, the videos published on YouTube began to operate on the web independently, spreading knowledge about microplastics. During the animation, it was necessary to cooperate with many people and substantive and methodological verification.
It was also important to translate the animation on microplastics on YouTube into Polish. They perfectly enriched the campaign and materials produced as part of the project.
Work on all the elements of the campaign required correlating substantive knowledge with a good, unambiguous graphic message, and thus coordinating the cooperation of project coordinators, creators of lectures and graphics both during the creation of scenarios and transposing them into an artistic language.

- **POLAND**: List of personal care cosmetic products (PCCPs) containing microplastic (as for 2017)
- campaign - 36 letters and multimedia presentation to cosmetics manufacturers containing microplastics
- **Campaign** on the website, on social media, during outdoor educational events
- list of stores where you can buy cosmetics free from microplastics
- 1000 invitations to online course
- 500 posters
- 4000 pocket cards
- 200 A5 folders – cardboard 95% recycled
- 100 A5 wooden clipboards

Summary

In Plastic Free Baltic project 28 people altogether were involved. In Poland those were authors, graphics, IT specialists, scientists, coordinators, volonteers. Multi-language course for BSR countries needed smooth and reliable cooperation with national coordinators.

We would like to say many thanks to all the team and hope we will meet working on other projects for better and healthier life on the Baltic Sea.

Maria Weber
Joanna Lepczak-Michalska
Ewa Siedlecka
Ewa Podlesińska