



Climate for People - People for Climate

The e-catalogue prepared within the
„Friendly Climate” project

The „Friendly Climate” project aimed to come up with ideas on solving climate related issues in the region. We have outlined and discussed the reasons for why climate change is happening and what we as the young generation can do to solve this issue. This report is a collection of notes and experiences from our youth exchange summarizing everything that we have created during those few days.



Air pollution

Air pollution is one of the biggest problems we face, especially in high populated areas. According to Eurostat, Poland is the worst offender at 33,2 and 24,3 micrograms per m³ of urban population exposure to air pollution by particulate matter.

On the other side the lowest level of air pollution among our partner countries is in Spain with 19,8 and 11,7 mg/m³.

Tabela 3. Narażenie ludności miejskiej na powietrze zanieczyszczone pyłem PM10 i PM2,5 w krajach Unii Europejskiej

Table 3. Urban population exposure to air pollution by particulate matter PM10, PM2,5 in European Union countries

Kraje Countries	PM10				PM2,5			
	2010	2015	2017	2018	2010	2015	2017	2018
	mikrogramy na m ³				micrograms per m ³			
UE-28 / EU-28	26,3	23,2	21,7	21,6	18,1	15,6	14,1	13,8
Austria / Austria	26,9	20,4	19,1	21,8	19,9	12,7	14,1	15,5
Belgia / Belgium	27,0	21,4	20,4	21,5	17,7	14,8	12,8	12,8
Bułgaria / Bulgaria	48,4	36,2	36,8	33,8	31,1	13,5	23,8	20,1
Chorwacja / Croatia	.	33,1	35,1	33,8	.	13,5	19,0	20,3
Cypr / Cyprus	48,0	34,9	29,2	29,9	22,2	22,0	14,7	13,2
Czechy / Czechia	29,9	24,3	23,9	25,8	22,8	25,0	18,4	19,5
Dania / Denmark	12,1	18,3	15,5	18,3	11,0	17,4	9,2	12,0
Estonia / Estonia	15,0	13,4	10,7	13,3	7,6	13,4	5,3	6,2
Finlandia / Finland	13,4	11,3	10,0	11,5	8,4	19,0	4,9	6,4
Francja / France	25,0	20,5	19,1	18,3	18,3	13,0	12,0	11,7
Grecja / Greece	33,4	26,5	25,3	27,1	.	7,9	13,5	13,4
Hiszpania / Spain	23,9	23,5	22,0	19,8	12,4	16,4	12,1	11,7
Holandia / Netherlands	24,7	19,7	19,2	20,2	17,1	.	11,3	11,8
Irlandia / Ireland	15,6	13,2	11,5	13,3	10,9	6,7	7,7	7,9
Litwa / Lithuania	26,9	21,7	22,8	20,0	.	15,9	8,6	8,6
Luksemburg / Luxembourg	17,0	21,4	22,5	21,1	16,0	10,9	13,2	11,1
Łotwa / Latvia	24,4	19,9	17,2	23,3	.	17,2	13,6	16,1
Malta / Malta
Niemcy / Germany	22,9	18,9	17,6	18,8	17,4	11,3	12,8	13,1
Polska / Poland	39,7	33,0	32,5	33,2	30,5	14,3	24,1	24,3
Portugalia / Portugal	25,4	19,8	18,2	18,5	8,8	23,8	12,0	10,8
Rumunia / Romania	34,9	27,7	26,6	26,4	19,1	10,2	20,4	20,0
Słowacja / Slovakia	29,6	23,9	24,2	24,8	22,8	21,6	17,5	16,9
Słowenia / Slovenia	28,2	27,7	24,8	24,1	21,8	17,1	19,7	18,3
Szwecja / Sweden	14,0	13,0	11,8	13,1	7,4	6,0	5,4	6,2
Węgry / Hungary	31,3	26,9	26,5	27,6	22,3	11,7	20,9	17,7
Wielka Brytania / United Kingdom	17,8	17,2	15,6	15,5	13,6	5,8	9,9	10,1
Włochy / Italy	30,5	32,7	28,9	26,1	23,4	21,9	19,2	16,0

Źródło: baza danych Eurostatu.

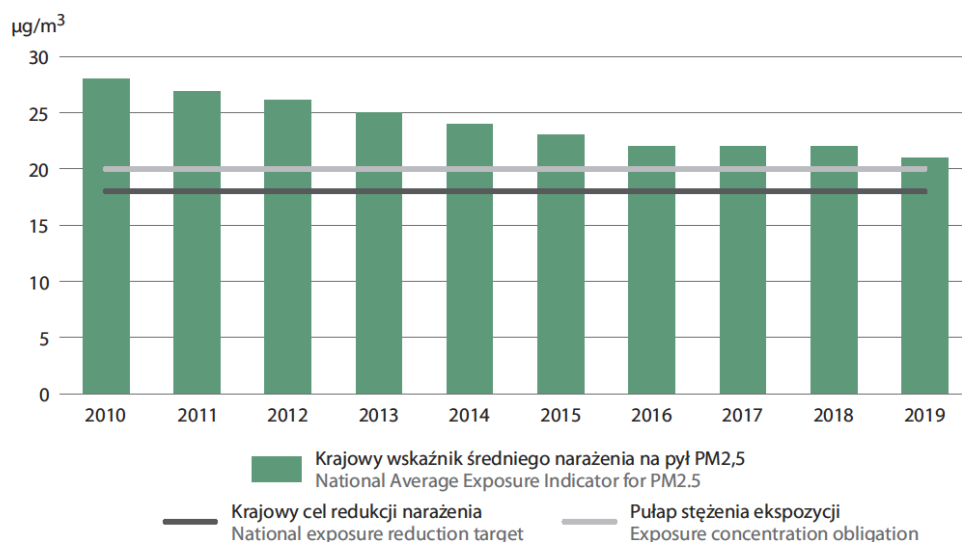
Source: Eurostat Database.

If we look at the beautiful country we were in during a mobility, we can see the situation is not very good - 33 out of the 50 most polluted cities of Europe are in Poland. The city of Łódź is 113th on the list of iQair for 2020. The city just bordering Łódź called Zgierz is on the 40th place. The 1st one on the list in Europe and 152nd in the world is a city called Orzesze, also in Poland.

Below is a graph indicating the national exposure to particulate matter - a key component of smog - and what we can see is that it's been steadily dropping for the last ten years. The European environmental report for 2020 says: „In spite of the improvement of **air quality** in Poland, exceedances of target value for tropospheric ozone in the summer season and exceedances of limit values for PM10, PM2,5 and benzo(a)pyrene in the winter season remain a serious problem. The latter is particularly related to emission from domestic heating for households and obsolete transport options”.

Wykres 11. Krajowy wskaźnik średniego narażenia na pył PM2,5 w latach 2010-2019

Chart 11. National Average Exposure indicator for PM2.5 in years 2010-2019



Źródło: dane Głównego Inspektoratu Ochrony Środowiska.
Source: data of the Chief Inspectorate of Environmental Protection.

Air pollution

What is more, our emissions are on the rise, especially in the transport sector. We emitted 60 million tons of CO₂ in 2020 and this trend is not likely to get reversed.

After the communist regime fell in 1989, cars became a sort of symbol of wealth. So now that Poles are richer than ever car purchases have shot up and so have the emissions of gases coming from the exhaust fumes.

Tabela 4. Emisja zanieczyszczeń ze środków transportu drogowego
Table 4. Pollutants emission from road transport facilities

Wyszczególnienie Specification	2000	2005	2010	2015	2017	2018
	w tysiącach ton in thousand tonnes					
Dwutlenek węgla Carbon dioxide	27 166,31	34 456,05	47 745,75	46 223,43	61 200,05	63 047,23
Metan Methane	8,21	6,66	6,28	4,75	5,37	5,52
Podtlenek azotu Nitrous oxide	3,28	1,68	1,65	1,59	2,12	2,22
Tlenek węgla Carbon oxide	1 399,72	795,36	715,43	485,23	543,76	526,05
Niemetanowe lotne związki organiczne Non-methane volatile organic compounds	175,58	113,37	99,44	70,20	75,63	73,96
Tlenki azotu Nitrogen oxides	227,63	237,23	290,71	231,13	286,92	286,74
Pyły Particulates	12,54	15,77	21,02	17,51	22,64	23,11
Dwutlenek siarki Sulphur dioxide	8,22	1,10	0,46	0,44	0,55	0,57
Ołów Lead	103,68	4,58	6,73	6,52	8,69	9,10

Źródło: dane Krajowego Ośrodka Bilansowania i Zarządzania Emisjami IOŚ-PIB.
Source: data of the National Centre for Emissions Management IEP-NRI.

Air pollution

But what are the solutions?

Locally for example, city authorities help with replacement of heating furnaces which have been a big problem. Also the government issues financial support for sun energy powered homes. As well to minimize combustion engine use, driving an electric car gives many benefits i.e. reserved parking spaces, smaller insurance costs, sometimes even special lanes.



This translates to: *Up to 80% nonrefundable subsidy for an eco furnace!*

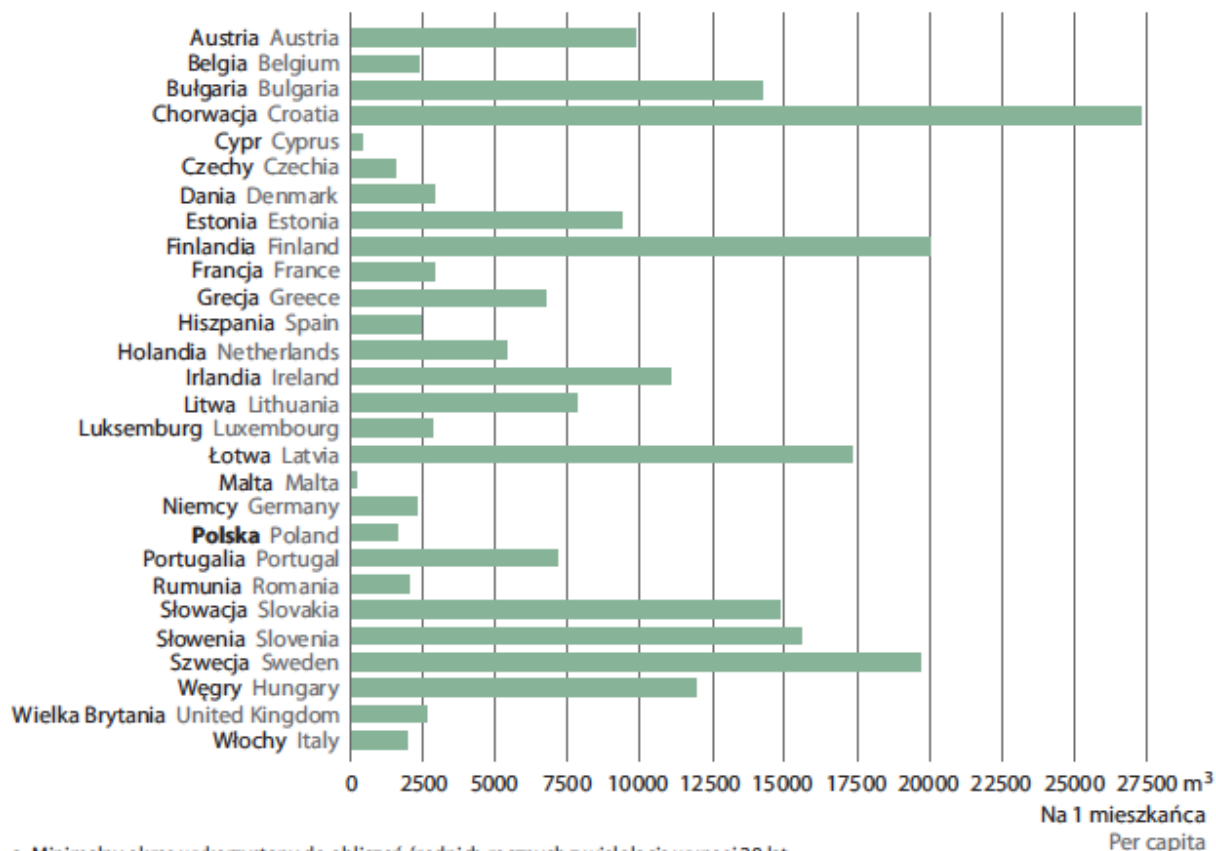
Water management

Water management is also a big problem. Poland is a country with a small amount of water (only about 60 mld m³). This makes drought a very serious problem. In the last 10 years only 3 were without a serious drought threat. We also don't store water. Our backup water storage accounts for only 6% of all the water used in the country.

Romania and Spain have only slightly better situation in this aspect. Among our partners the highest amount of drinking water per capita is in Slovenia, but Hungary has a lot of drinking water too.

Zasoby wód w krajach Unii Europejskiej (średnia z wielolecia)^a

Fresh water resources in European Union countries (long-term average)^a



^a Minimalny okres wykorzystany do obliczeń średnich rocznych z wielolecia wynosi 20 lat.

^a The minimum period taken into account for the calculation of long term annual averages is 20 years.

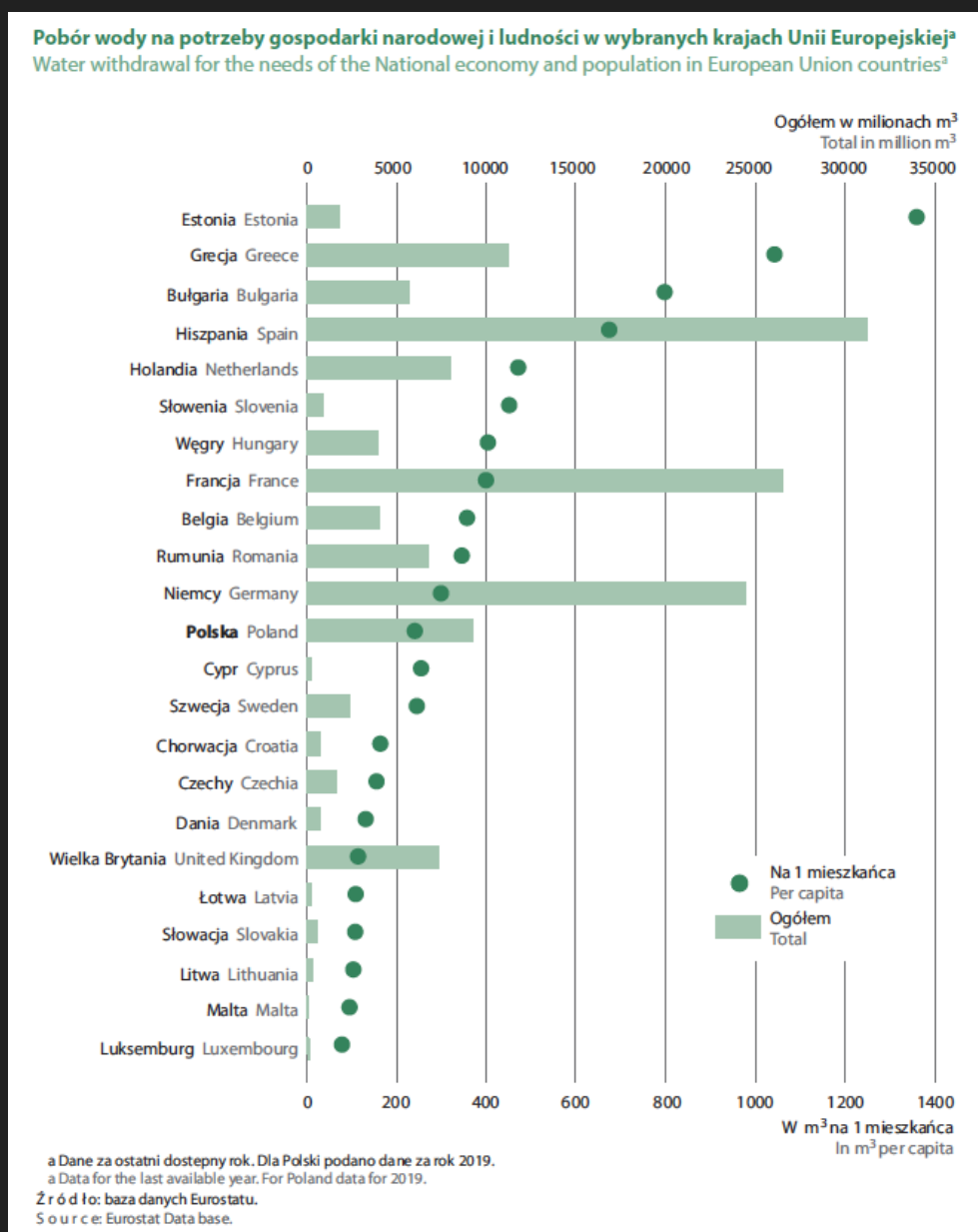
Źródło: baza danych Eurostatu.

Source: Eurostat Database.

Water management

Luckily water usage has been steadily dropping over the last couple of years. In Poland last year we used 9,3 thousand hm³ of water and 68% of that was used by heavy industry.

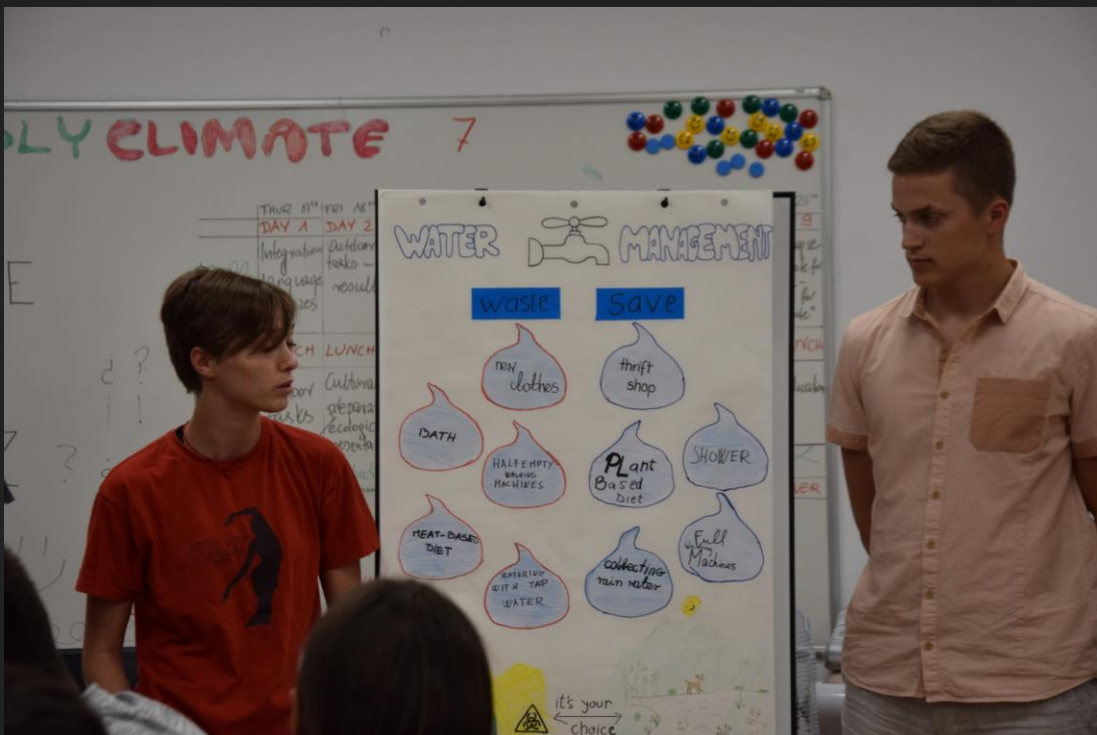
When it comes to water usage, Spain is one of the worst offenders needing more than 30 000 million m³ of water to sustain its economy. But on the positive note their usage of water has been slowly dropping for the last 20 years.



Water management

Ecological facts and tips regarding the water management:

- some statistics estimate that the washing machine is responsible for 7% of your energy bill,
- about 90% of the energy the washing machine uses goes towards heating the water,
- USE COLD WATER to save about 725 kg carbon dioxide/year,
- try to eat less meat as the water footprint of meat production is one of the highest,
- try to buy things second hand as 2700 liters of fresh water are needed to produce one T-shirt - such an amount is enough drinking water for one person for 2,5 years.



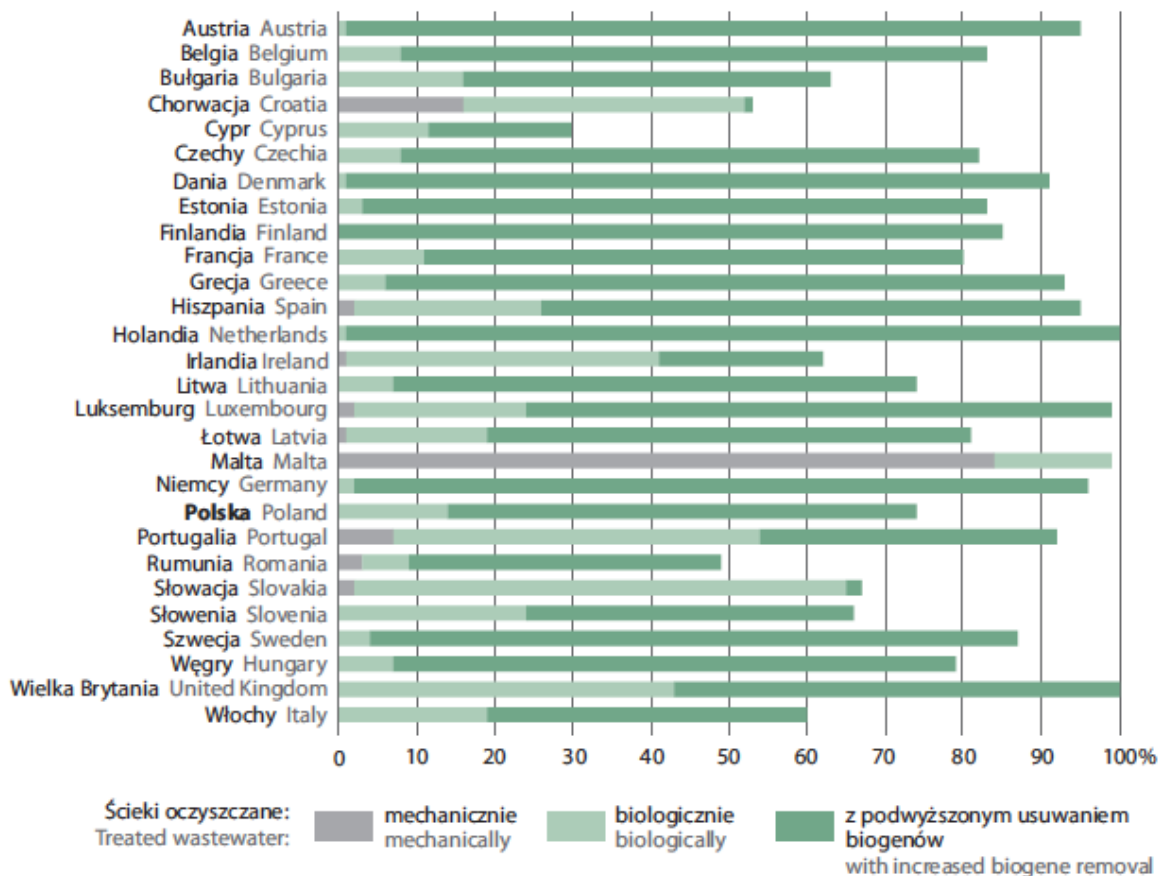
This is one of the groups talking about possible solutions.

Water management

We also cannot forget about the water waste we produce. In Poland only 74% of the population is connected to sewage farms. Most other European countries reuse 90 or even a 100% of their wastewater, but there are also countries like Romania where only 50% gets recycled. Only in 7 countries 95% of the population or more is connected to sewage farms and Spain is one of them.

Ludność korzystająca z oczyszczalni ścieków^a w krajach Unii Europejskiej

Population connected to wastewater treatment^a in European Union countries



^a Dane za ostatni dostępny rok.
^a Data for last available year.

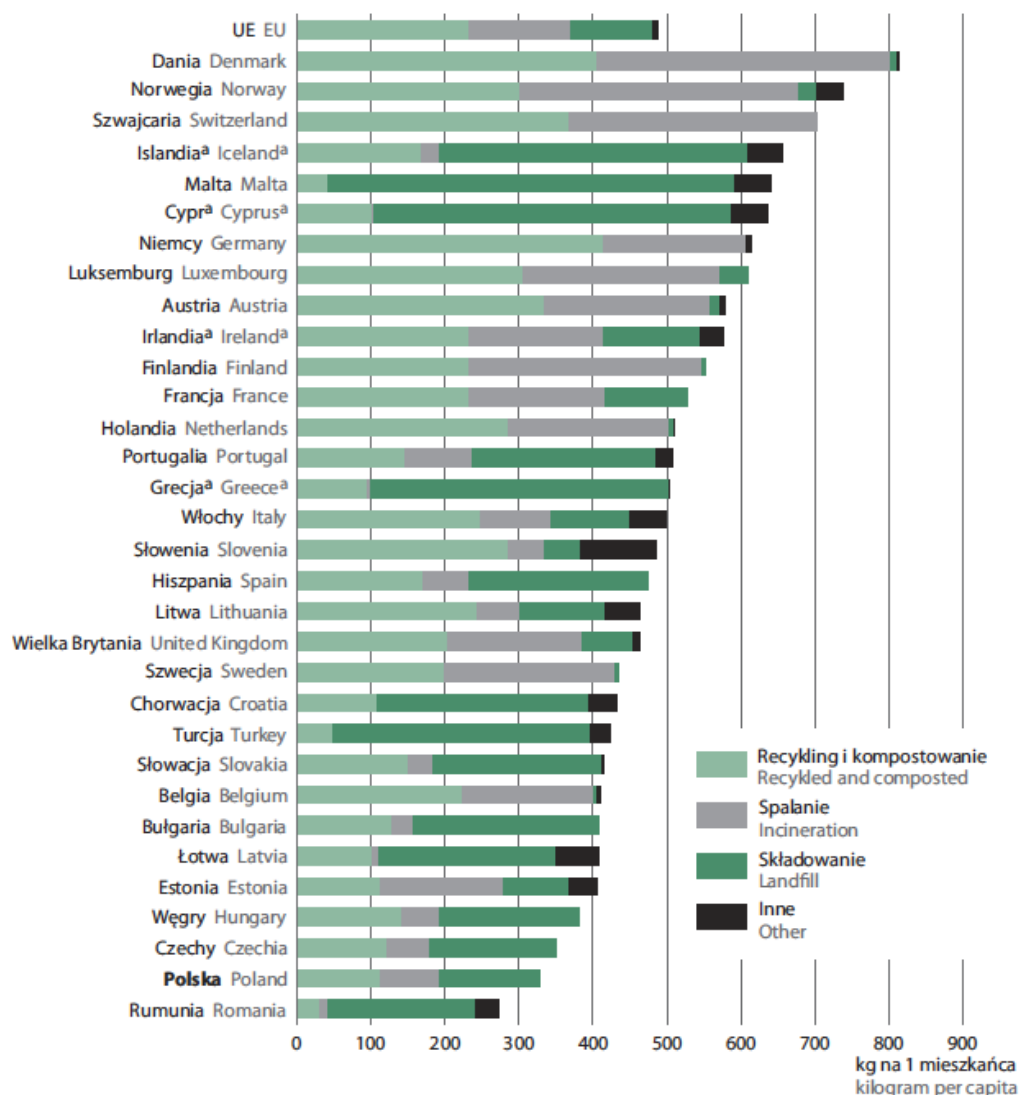
Źródło: baza danych Eurostatu.
Source: Eurostat Database.

Waste

In the last decade we started looking into waste and how much of it we produce. The European average has been steadily dropping and in 2018 it was 489 kg per capita. Poland, along with Romania and Hungary, has one of the lowest waste use of 324 kg. But most of waste is produced in the most developed countries in the EU, e.g. Denmark – 819 kg. Also countries with a lot of tourism produce a lot of trash, e.g. Malta – 640 kg.

Odpady komunalne wytworzone według sposobów zagospodarowania w krajach europejskich w 2018 r.^a

Municipal waste generated by treatment method in European countries in 2018^a



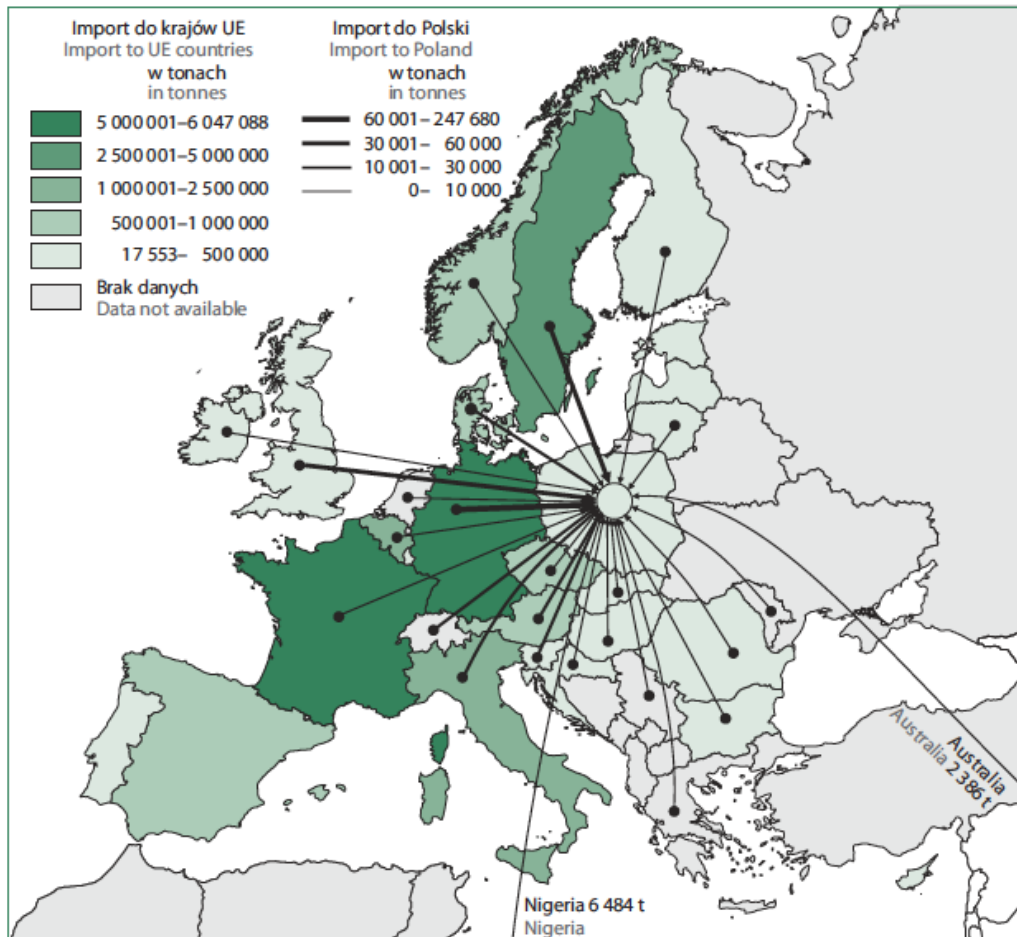
^a Dla Cypru, Grecji, Irlandii i Islandii podano dane za rok 2017.
^a Data for Cyprus, Greece, Ireland and Iceland concern 2017.

Źródło: baza danych Eurostatu.

Waste

What has also been happening is countries having no space to store their trash decided to export it to other countries. This phenomenon has been affecting Poland. We import 545 thousand tons of waste from other countries. From that number 527 thousand tons comes from the EU. Poland has become a sort of waste storage bin of Europe. In a lot of cases it's cheaper to pay someone to transport waste to Poland than to get it recycled domestically.

Import odpadów do krajów Unii Europejskiej w 2018 r.
Import of waste to European Union countries in 2018



Źródło: opracowanie własne na podstawie bazy danych Eurostatu.
Source: own elaboration on the basis of Eurostat Database.

Waste

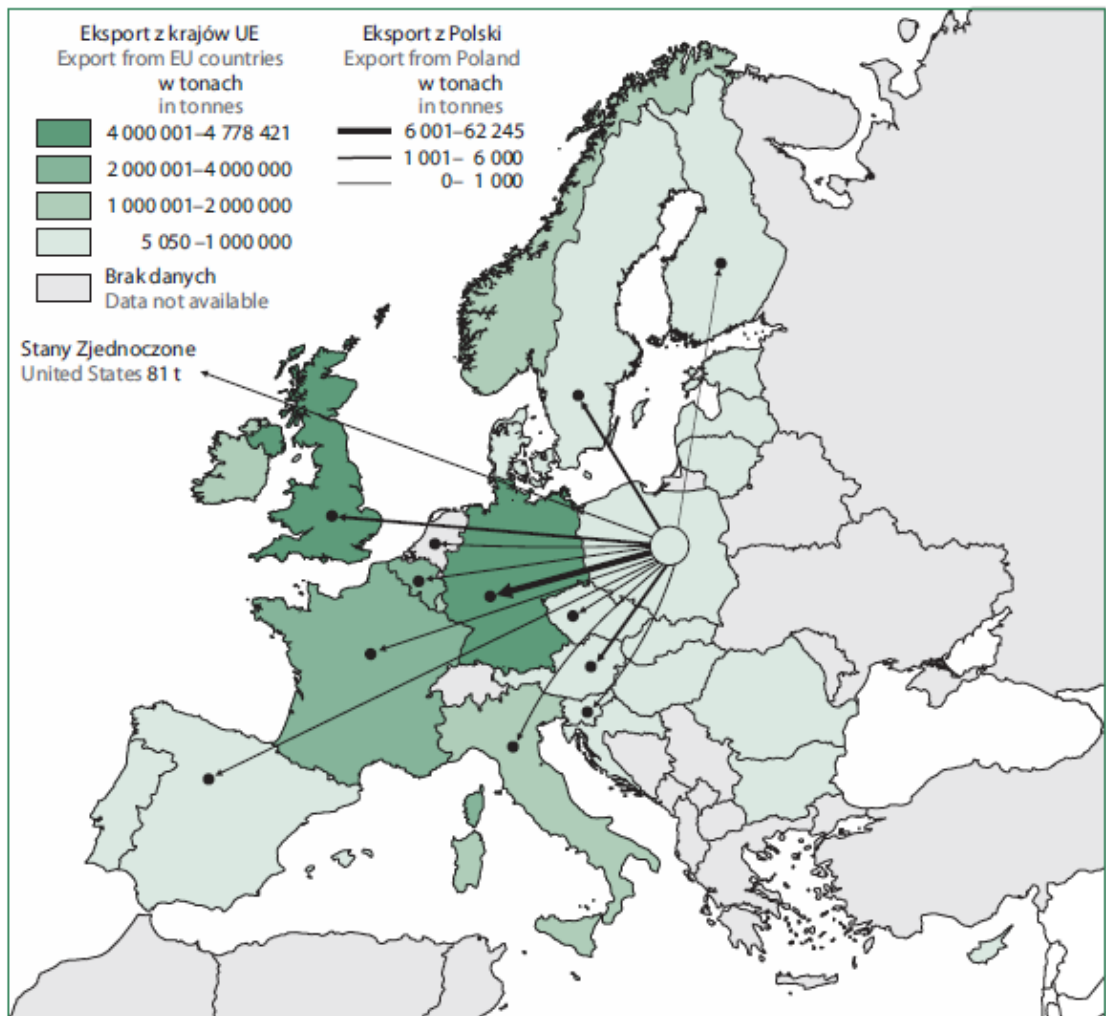
This type of industry is dangerous for anyone living near to a landfill. In 2018 in the city of Zgierz a large landfill was set on fire. This would be a big problem on its own, but what is worse no one knew what was actually burning. It turned out that most of the landfill was covered in chemical waste imported from Germany. Most of the city was affected and to this day many people suffer from cancer, lung diseases and cardiovascular problems caused by the fire.



Waste

We also export a lot of our waste elsewhere. But most of what we export is waste that can't be stored domestically like chemical waste, flammable substances, etc. Most of these end up in special facilities designed to get rid of such waste. A lot of waste we export comes from the mining industry. The rocks and soil that has no use to us is sold into neighbouring countries.

Eksport odpadów z krajów Unii Europejskiej w 2018 r.
Export of waste from European Union countries in 2018



Źródło: opracowanie własne na podstawie bazy danych Eurostatu.
Source: own elaboration on the basis of Eurostat Database.

We would like to thank everyone that participated in this project. All participants had their part in making our mobility special. Together we discovered many new things, learned a lot about the climate, and learned how to talk about ecology to people on the street. We as the young generation have a big responsibility. It is on us to solve the problems of the modern world and maybe make some friends along the way.

Thank you!



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