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Submission to the Committee on the Rights of the Child Regarding the Adverse Impact of Coal Extraction and Combustion in Poland on Children Rights

1 Poland's Coal Activities

Poland is the second largest user of coal and lignite for energy production within the European Union[1]. At the end of 2017, nearly half Poland's fuel consumption was supplied by coal[2] and future projections by Poland's Ministry of Energy still see coal as a major fuel source until the year 2050[3]. Coal is regarded as a long-term energy supply and as a cornerstone of Poland's energy system[4]. It is so deeply ingrained within Poland's energy supply that three more coal power plants are expected to become functional by the year 2021[5].

2 Effect of Coal on Children's Health

Air pollutants from power plants are not only harmful but they are persistent. Particles that are a result from power plants are ozone, sulphur dioxide gas, nitrogen oxides, mercury and sulphate particulate matter[6]. These chemicals are associated with asthma, respiratory diseases, heart disease and have been shown to cause cognitive and lung developmental stunts[7].

Children are especially affected by these activities as pound per pound, children breathe 50% more air than adults due to their higher activity levels[8]. This coupled with the fact that children spend more time outdoors puts them at higher risk to health complications that arise due to air pollution[9]. Such exposure can lead to higher asthma attacks and higher rate of hospitalizations related to respiratory related issues that can deprive children from education due to lost school days[10]. In addition, a lifetime exposure of such toxic substances has been associated with cancer in adults, thus depriving children from a healthy life.

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[1] "European Coal Map." European Coal Map, www.coalmap.eu/#/climate-problem.
[2] PSE S.A. Polish Transmission System Operator Report (picture 6.2.) - https://www.pse.pl/dane-systemowe/funkcjonowanie-rb/raporty-roczne-z-funkcjonowania-kse-za-rok/raporty-za-rok-2017#r1_2
[3] International Energy Agency, "Energy Policies of IEA Countries – Poland", 2016 Review. See p. 63 https://www.iea.org/publications/freepublications/publication/Energy_Policies_of_IEA_Countries_Poland_2016_Review.pdf
[4] International Energy Agency, "Energy Policies of IEA Countries – Poland", 2016 Review. See p. 11 https://www.iea.org/publications/freepublications/publication/Energy_Policies_of_IEA_Countries_Poland_2016_Review.pdf
[5] PSE S.A. Polish Transmission System Operator Report https://www.pse.pl/dokumenty?safeargs=666f6c64657249643d3333393139
[6] Hill, L. Bruce, and Martha Keating. "Children at Risk: How Air Pollution from Power Plants Threatens the Health of America's Children." Physicians for a Social Responsibility Report, Apr. 2002.
[7] Ibid.
[8] Ibid.
[9] Ibid.
[10] Hill, L. Bruce, and Martha Keating. "Children at Risk: How Air Pollution from Power Plants Threatens the Health of America's Children." Physicians for a Social Responsibility Report, Apr. 2002.

2.1 Obligations under the Convention on the Rights of the Child (CRC)

As recognised by the Committee on the Rights of the Child in 2016, "without a healthy environment a child cannot live or develop".[11] As a signatory of the CRC, Poland has obligations to ensure that all the rights provided under the convention are being respected and upheld. These include the "inherent right to life" [12] and the "enjoyment of the highest attainable standard of health"[13]. The Committee on the Rights of the Child has addressed specifically the issue of coal burning activities and its impacts on children's rights through the State reporting procedure. In its Concluding Observation on Germany, the Committee noted "that the State party uses a significant amount of coal to produce power and is concerned about the negative impact that coal emissions have on children's health[14]".

2.2 Polish Coal and Children's Health

Poland has some of the worst air quality in Europe[15] with 46 020 premature deaths linked to PM 2,5 emission exposure; 1700 attributable to NO2 emission exposure, and 3425 to O3 emission exposure[16]. In addition, five of the most health affecting coal power plants in Europe are located in Poland. According to the Europe's Dark Cloud Report the Bełchatów Power Station is the world's second largest lignite-fired power station. The Report warns that it has the worse impacts on human health of all power plants located in Europe, having contributed to almost 1,300 premature deaths in 2013, and to 27 830 asthma attacks in children.[17] Atmospheric pollution generated by coal power plants based in Poland is also responsible adverse health impacts in neighbouring countries, causing an estimated 4,690 premature deaths abroad).[18] It is clear that Poland's dependency on coal has been at the expense of the health of children. We therefore ask for the Committee to seek a clarification from Poland regarding how the State protects the right of the child to life and to health in the context of this energy policy.

More information on the health impacts of coal combustion in Poland – in particular on children - is available in Annex.

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[11] Committee on the Rights of the Child, Report from the Day of General Discussions "Children's Rights and the Environment", (2016), page 9.
[12] Convention on the Rights of the Child, Article 6
[13] Convention on the Rights of the Child, Article 24
[14] Committee on the Rights of the Child, Concluding Observations on Germany (2014), CRC/C/DEU/CO/3-4. See also the concluding observations on Russia (2014), CRC/C/RUS/CO/4-5.
[15] WHO data and statistics http://www.euro.who.int/en/health-topics/environment-and-health/air-quality/data-and-statistics
[16] Table 10.1 Premature deaths attributable to PM2.5 (a), NO2 (a) and O3 exposure in 41 European countries and the EU-28, 2014 – EEA Report: Air Quality in Europe 2017 https://www.eea.europa.eu/publications/air-quality-in-europe-2017
[17] Europe's Dark Cloud – How coal-burning countries are making their neighbours sick, CAN Europe, HEAL, WWF European Policy Office, Sandbag, June 2016. See p. 31-34 https://www.env-health.org/IMG/pdf/dark_cloud-full_report_final.pdf
[18] See "Europe's Dark Cloud: Coal-burning EU countries make their neighbours sick", Health and Environment Alliance (HEAL), Climate Action Network (CAN) Europe, WWF European Policy Office and Sandbag (2016).

2.3 Question for the Committee to ask Poland

It is thus that in light of the potential violations by Poland of its obligation to protect the right of the child as mandated under the CRC, we call upon the Committee to ask the following question:

> ***Please provide information on how health impacts on children due to activities from coal burning activities are addressed and mitigated and how the government plans to address energy-related atmospheric pollution in the future in order to reduce and eliminate future harm on the health of children in Poland and in neighbouring countries.***

3 Effect of Coal on Children's Rights through Climate Change

In addition to its direct adverse impacts on the rights of children, coal extraction and burning also affect significantly the rights of Children provided under the CRC through their emissions of greenhouse gases resulting from these activities and their contribution to global climate change. By exacerbating global climate change, burning coal contribute to the slow onset events – such as temperature increase and sea-level rise, as well as to climate-related disasters. As noted by the Human Rights Council, children are among the most vulnerable to climate change.[19] Climate change can constrain access to clean drinking water[20], which could prevent a child's right to health. Forced displacement linked with climate related exoduses can be detrimental to a child's access to adequate education[21]. The Committee on the Rights of the Child (CRC) has highlighted previously that climate change causes adverse impacts on many of the rights protected by the Convention on the Rights of the Child, including the rights to education, to the highest attainable standard of health, adequate housing, safe and drinkable water and sanitation, and food and nutrition security.[22] In its General Comment on the Right to Health, the Committee identified climate change as "one of the biggest threats to children's health and exacerbates health disparities".[23]

3.1 Obligations under the CRC

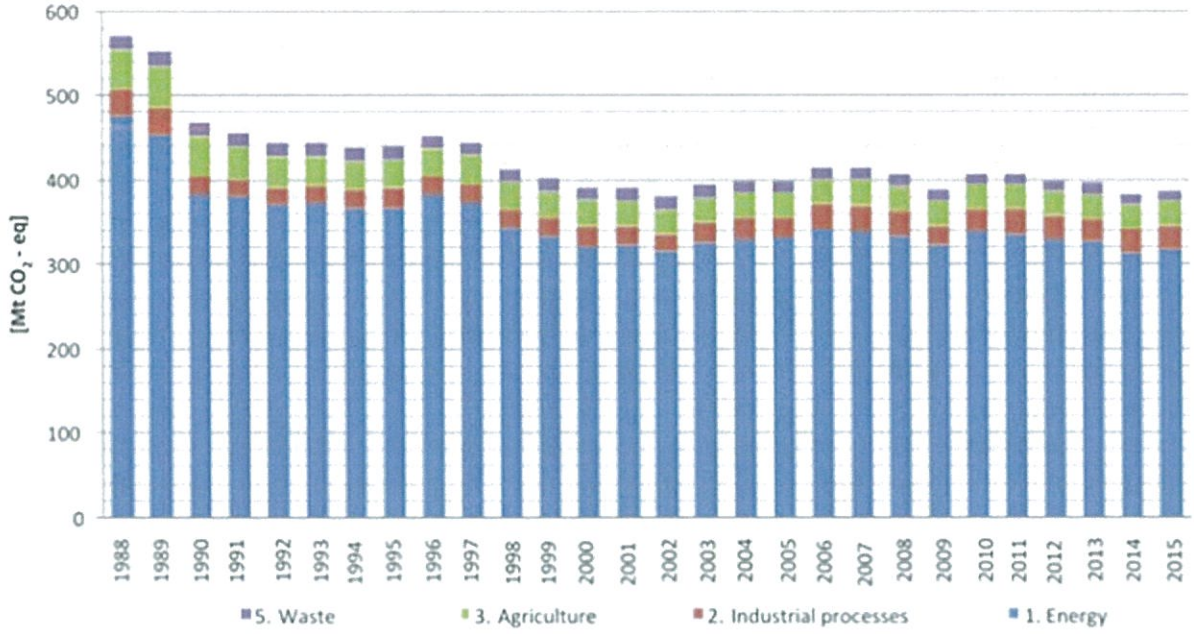
Under the CRC, Poland has obligations to protect and ensure the rights of the child in light of global climate change. The Committee has emphasized the importance of reducing coal burning activities in order to safeguard children's rights in the context of global climate change. In its concluding observations concerning Spain, the Committee recommended that "the State party

[19] Human Rights Council Resolution 32/33 (2016) and Resolution 35/20 (2017).
[20] Gibbons, Elizabeth D. "Climate Change, Children's Rights, and the Pursuit of Intergenerational Climate Justice." Health and Human Rights, vol. 16, no. 1, 2014, pp. 19–31. JSTOR, JSTOR, www.jstor.org/stable/healhumarigh.16.1.19.
[21] Gibbons, Elizabeth D. "Climate Change, Children's Rights, and the Pursuit of Intergenerational Climate Justice." Health and Human Rights, vol. 16, no. 1, 2014, pp. 19–31. JSTOR, JSTOR, www.jstor.org/stable/healhumarigh.16.1.19.See note on Children in Syria.
[22] See CRC Concluding Observations on Tuvalu (2013), Saint Lucia (2014), Jamaica (2015) and Kenya (2016).
[23] CRC General comment No. 15 (2013) on the right of the child to the enjoyment of the highest attainable standard of health (art. 24) (2013)

carry out an assessment of the impact of air pollution from coal-fired power plants on children's health and on the climate as a basis for designing a well-resourced strategy to remedy the situation and regulate strictly the maximum emissions of air pollutants, including by private businesses".[24]

3.2 Polish coal impact on climate and children rights

According to governmental data, the energy sector in Poland is responsible for over 40% of the national emissions of greenhouse gases. Due to its heavy reliance on coal and lignite for the generation of energy and to the lack of adequate climate mitigation policies, Poland has failed to reduce its emissions of greenhouse gases for the past 15 years.[25]



Trend of greenhouse gas emissions recalculated as CO2 equivalent in the years 1988–2015 (Source: Government of Poland)

By continuing is dependency on coal and a fuel source, Poland is contributing to global climate change and thus aiding in the violation of children's rights. The effects, though global, also have immediate effects on the children on Poland. Changing climatic conditions contribute to the increase in the tick population and the widening of their territory, thus increasing the risk Lyme disease among children.[26] Another important threat will be caused by food-borne diseases and water. In winter, the number of patients suffering from salmonella infection is about 500 cases per

[24] Committee on the Rights of the Child, Concluding Observations on Spain (2018), CRC/C/ESP/CO/5-6.
[25] Government of Poland (2017) Poland's Seventh National Communication and Third Biennial Report under the UNFCCC, available at http://unfccc.int/files/national_reports/non-annex_i_parties/biennial_update_reports/application/pdf/8193245_poland-br3-nc7-1-nc7-br3_poland.pdf
[26] Wpływ zmiany klimatu na zdrowie (The impact of climate change on health), Koalicja Klimatyczna and HealPolska, 2018. See p.35
http://www.koalicjaklimatyczna.org/theme/UploadFiles/Wplyw_zmiany_klimatu_na_zdrowie_ost2.pdf

month, and in the summer this increases up to 2,500 cases[27]. In terms of climate, carbon dioxide is responsible for the increase in the occurrence of allergies. In Poland, the number of allergy sufferers makes up about 30% of the population, and in the last decade the number of patients with allergic rhinitis and bronchial asthma has doubled.[28] In addition, climate change effects the weakest – children, the elderly, suffering from chronic diseases, and poor and homeless people.

More information on the climate-induce adverse impacts of coal combustion in Poland is available in Annex.

3.3 Question for the Committee to ask Poland in relation to global climate change

It is important that Poland also address the issue their coal consumption in the context of global climate change. It is thus that we implore the Committee to ask the following question to the government of Poland:

> ***Please provide further information on how the State party seeks to reduce its emissions of greenhouse gases – particularly in relation to its heavy reliance on coal-fired power plants – in order to protect the rights of children in Poland and in other countries from adverse climate-induced impacts.***

[27] Wpływ zmiany klimatu na zdrowie (The impact of climate change on health), Koalicja Klimatyczna and HealPolska, 2018. See p.31
http://www.koalicjaklimatyczna.org/theme/UploadFiles/Wplyw_zmiany_klimatu_na_zdrowie_ost2.pdf
[28] Wpływ zmiany klimatu na zdrowie (The impact of climate change on health), Koalicja Klimatyczna and HealPolska, 2018. See p.29
http://www.koalicjaklimatyczna.org/theme/UploadFiles/Wplyw_zmiany_klimatu_na_zdrowie_ost2.pdf

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1/08/2018

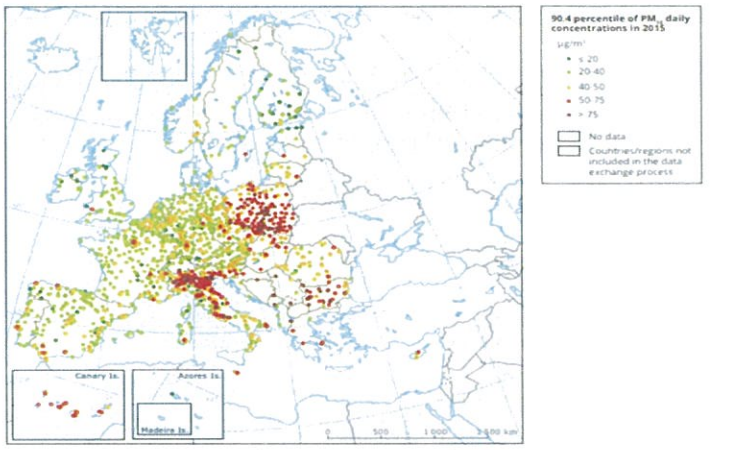
Annex: Data and respective sources related to air pollution, coal power plants and the associated health effects

Air Pollution in Poland

- According to the WHO 2016 Report, Poland has some of the worst air quality in Europe, with 33 of the continent's 50 most polluted cities.[29]
- 46 020 premature deaths in Poland are attributable to PM 2,5 emission exposure; 1700 are attributable to NO2 emission exposure, and 3425 to O3 emission exposure.[30]
- The main source of air pollution in Poland is domestic heating (coal and waste combustion), transport and industry.[31]
- Domestic heating is responsible for 88,2% of PM10 emissions, 86,5% of PM 2.5 emissions and 98% of benzo(a)pyrene (BaP) emissions in Poland (2013).[32]
- Transport is responsible for 5,77% of PM10 emissions and industry, heating and power plants for 1,84% of PM10 emissions (2013).[33]
- According to European Environmental Agency in 2015 for example, over 99% of the urban population in Poland was exposed to concentrations of BaP and over 80% was exposed to concentrations of PM10, which was above EU standards.[34]
- Daily PM10 concentrations in 2015 amounted to 50-75 µg/m3 in most of Poland's territory, and even beyond 75 µg/m3 in the south of Poland.[35]

[29] WHO data and statistics http://www.euro.who.int/en/health-topics/environment-and-health/air-quality/data-and-statistics
[30] Table 10.1 Premature deaths attributable to PM2.5 (a), NO2 (a) and O3 exposure in 41 European countries and the EU-28, 2014 – EEA Report: Air Quality in Europe 2017 https://www.eea.europa.eu/publications/air-quality-in-europe-2017
[31] http://www.kobize.pl/uploads/materialy/Inwentaryzacje_krajowe/2015/Bilans%20emisji%20-%20raport%20podstawowy_2013.pdf
[32] Krajowy Program Ochrony Powietrza z perspektywą do 2030, Ministerstwo Środowiska – Departament Ochrony Powietrza (National Programme for Air Protection with 2030 perspective), Ministry of Environment – Department of Air Protection), Warsaw 2015. See p.21-23 https://www.mos.gov.pl/g2/big/2015_09/80dc29af24ec0a67355808f6279191ee.pdf
[33] Krajowy Program Ochrony Powietrza z perspektywą do 2030, Ministerstwo Środowiska – Departament Ochrony Powietrza (National Programme for Air Protection with 2030 perspective), Ministry of Environment – Department of Air Protection), Warsaw 2015. See p.21-23
[34] EEA Report https://www.eea.europa.eu/themes/air/country-fact-sheets/poland
[35] EEA Report: Air Quality in Europe 2017 See p.32 https://www.eea.europa.eu/publications/air-quality-in-europe-2017

Map 4.1 Concentrations of PM_{10}, 2015 — daily limit value

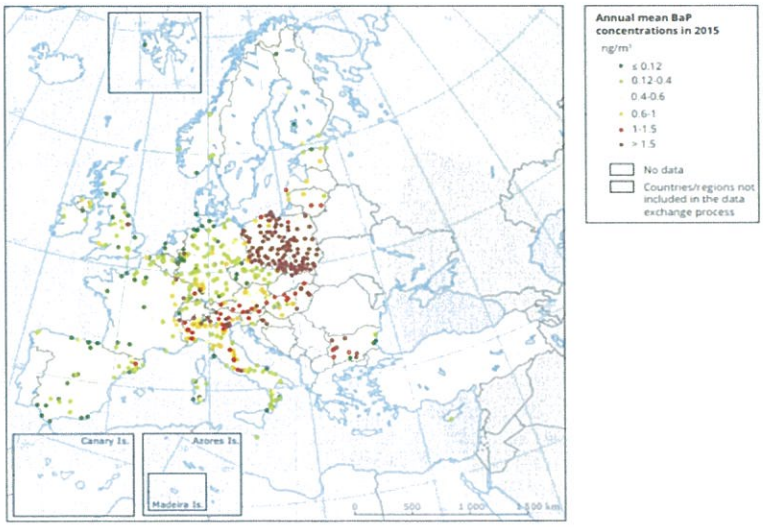


Note: Observed concentrations of PM_{10} in 2015. The map shows the 90.4 percentile of the PM_{10} daily mean concentrations, representing the 36th highest value in a complete series. It is related to the PM_{10} daily limit value, allowing 35 exceedances of the 50 µg/m³ threshold over 1 year. The red and dark red dots indicate stations with concentrations above this daily limit value. Only stations with more than 75 % of valid data have been included in the map. The stations from the former Yugoslav Republic of Macedonia are not included due to technical issues.

Source: EEA, 2017a.

- Moreover, Poland is the only country in Europe where the annual mean of BaP concentrations is regularly exceeded. In 2015, for example, the excess was 1,5 ng/m3 in almost the entire territory.[36]

Map 7.1 Concentrations of BaP, 2015



Notes: Dark green dots correspond to concentrations under the estimated reference level (0.12 ng/m³) (1). Dark red dots correspond to concentrations exceeding the 2004 EU AQ Directive target value of 1 ng/m³.

Only stations reporting more than 14 % of valid data, as daily, weekly or monthly measurements, have been included in the map.

Source: EEA, 2017a.

[36] EEA Report: Air Quality in Europe 2017 See p.43 https://www.eea.europa.eu/publications/air-quality-in-europe-2017

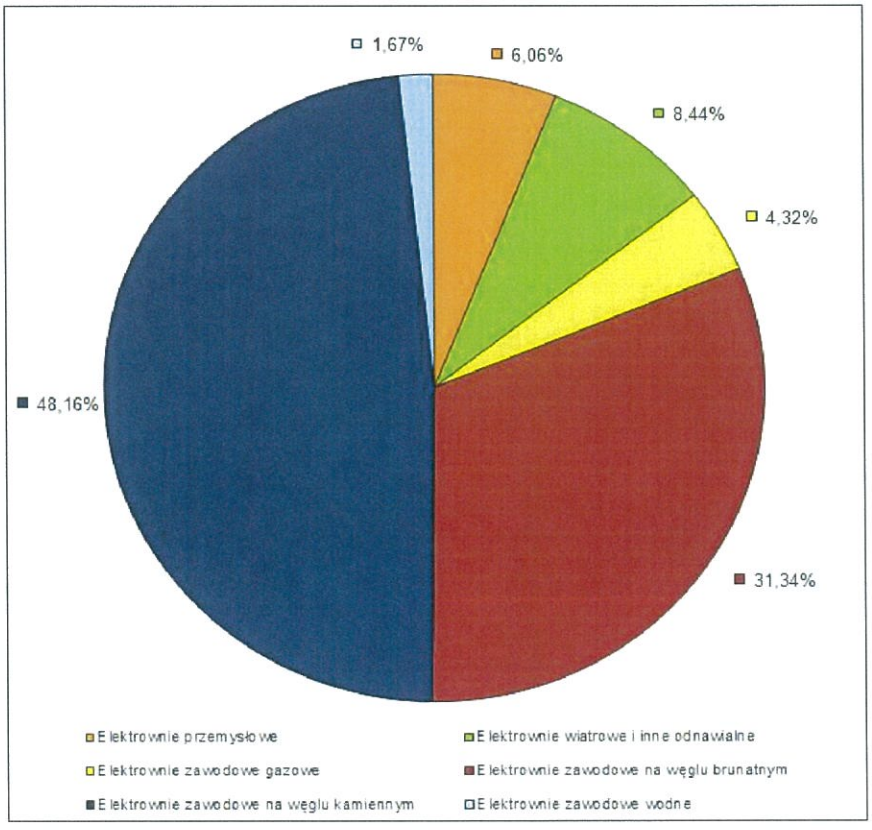
Coal power plants and sources of energy

- Five of the most health affecting coal power plants in Europe are located in Poland. At number one in the "Toxic 30" is Poland's Bełchatów that contributed to almost 1,300 premature deaths in 2013, and to 27 830 asthma attacks in children.[37]

FULL TABLE FOR FIGURE 8. THE COAL PLANTS WITH THE BIGGEST IMPACTS ON HEALTH (2013)

Rank	Power plant	Country	Premature Deaths	Chronic bronchitis	Hospital admissions	Lost working days	Asthma attacks in children	€m Health costs median	€m Health costs high
1	Bełchatów	PL	1,270	630	1,310	359,200	27,830	1,790	3,450
2	Maritsa East 2	BG	730	370	640	192,820	18,150	1,050	2,000
3	Kozienice	PL	650	320	660	186,500	14,140	920	1,770
4	Drax	UK	590	300	480	142,590	14,630	820	1,590
5	Rybnik	PL	480	240	490	134,660	10,380	670	1,290

- Electricity production at the end of 2017, according to fuel type was as follows: hard coal - 48.16%, lignite coal - 31.34%, natural gas - 4.32%, renewable sources (biomass, biogas, water, wind) - 10.11%, other - 6.06%[38]

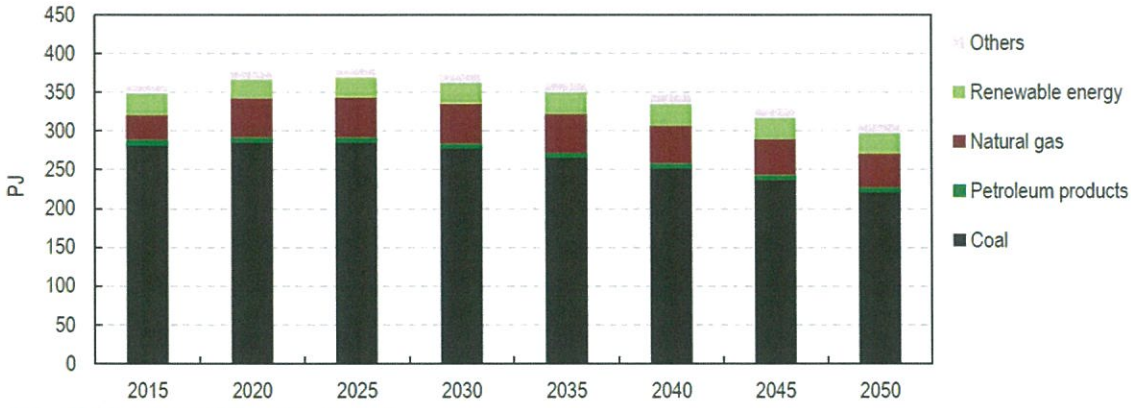


[37] Europe's Dark Cloud – How coal-burning countries are making their neighbours sick, CAN Europe, HEAL, WWF European Policy Office, Sandbag, June 2016. See p. 31-34 https://www.env-health.org/IMG/pdf/dark_cloud-full_report_final.pdf

[38] PSE S.A. Polish Transmission System Operator Report (picture 6.2.) - https://www.pse.pl/dane-systemowe/funkcjonowanie-rb/raporty-roczne-z-funkcjonowania-kse-za-rok/raporty-za-rok-2017#r1_2

- Despite being the most severe pollutant, coal will continue to play a significant role in the production of heat in Poland. According to the forecast prepared by the Ministry of Energy, it will continue to play a substantial part in the country's heat production until at least 2050.[39]

Figure 4.18 Heat production forecast by fuel, 2015-25



Source: Ministry of Energy, IDR country submission

- Moreover, securing Polish long-term energy supply will be a priority for the Polish government. According to the data from the 2016 Report regarding Energy Policies of IEA Countries – Poland, Poland's strategic approach is to keep using hard coal and lignite as the cornerstones of the energy system.[40]
- As a result, Poland continues to advance its plans for more coal-fired based power stations. It is confirmed that State controlled energy entities are pursuing three major coal plant investments, in Opole, Jaworzno and Turów, which will have a cumulative instated capacity of more than 3 gigawatts, which are due to come online by 2021.[41]

[39] International Energy Agency, "Energy Policies of IEA Countries – Poland", 2016 Review. See p. 63 https://www.iea.org/publications/freepublications/publication/Energy_Policies_of_IEA_Countries_Poland_2016_Review.pdf

[40] International Energy Agency, "Energy Policies of IEA Countries – Poland", 2016 Review. See p. 11 https://www.iea.org/publications/freepublications/publication/Energy_Policies_of_IEA_Countries_Poland_2016_Review.pdf

[41] PSE S.A. Polish Transmission System Operator Report https://www.pse.pl/dokumenty?safeargs=666f6c64657249643d3333393139

- It should be also highlighted that one more coal power plant in Ostrołęka is being considered as a high priority investment, although the building process has not started yet.[42]
- The Industrial Emission Directive (IED) 2010/75/EU contains numerous 'derogations' allowing existing plant operators to avoid the IED limits until 2024. Polish coal plants are the main beneficiaries of the system, combining several types of derogations.[43]
- For example, the Adamów plant is ranked 5th among Polish plants and 19th out of EU plants that caused the most premature deaths in 2013. All five boilers of this plant (each 351MWth) are allowed to apply an emission limit of 996/500/100mg/Nm³ for SO2, NOx and dust until 2024, whilst the outdated 2001 LCP Directive limits applicable from 2016

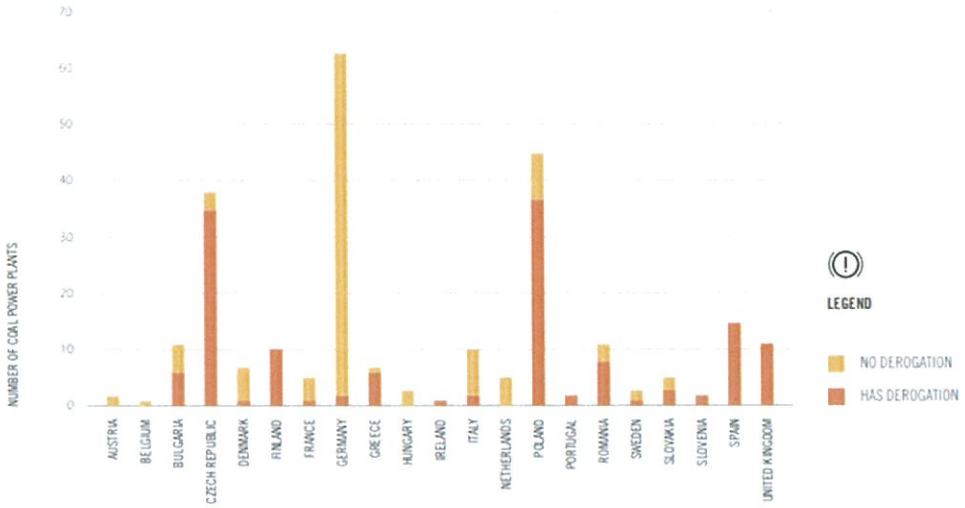
[42] http://elektrowniaostroleka.pl/inwestycje-w-realizacji/
[43] Lifting Europe's Dark Cloud – How cutting coal saves lives, EEB 2016, See p.27-28

would apply 400/200/50mg/Nm³, and under the IED, boilers would have to comply with limits of 200/200/20mg/Nm³.[44]

FIGURE 11.

COAL POWER PLANTS WITH IED DEROGATIONS

SEPTEMBER 2016



LIFTING EUROPE'S DARK CLOUD 27 45

[44] Lifting Europe's Dark Cloud – How cutting coal saves lives, EEB, Heal, CAN-EU, WWF, Sandbag, October 2016. See p.28 https://www.wwf.de/fileadmin/fm-wwf/Publikationen-PDF/Lifting_Europe_s_Dark_Cloud.pdf
[45] Lifting Europe's Dark Cloud – How cutting coal saves lives, EEB 2016, See p.27

Coal Plants with IED derogations in Poland[46]

COUNTRY / Plant name	Coal type	MWel	PREMATURE DEATHS				Derogation
			2013	IED	BREF	BAT	
POLAND							
Laziska	Hard coal	1,155	139	70	48	12	**LLD / AT**
Bielsko-Biala	Hard coal	161	12	2	1	0	**DH**
Lodz 3	Hard coal	206	59	14	9	2	**LLD / TNP / AT**
Lodz 4	Hard coal	200	42	11	8	2	**TNP / AT**
Turow	Lignite	2,062	358	153	110	28	**TNP**
Dolna Odra	Hard coal	1,362	141	79	54	12	**LLD / AT**
Ostroleka	Hard coal	722	193	50	34	8	**TNP / AT**
Polaniec	Hard coal	1,864	178	99	68	16	**LLD / AT**
Poznan Karolin	Hard coal	270	58	25	17	4	**TNP / AT**
Opole	Hard coal	1,532	162	112	79	19	**AT**
Rybnik	Hard coal	1,775	476	147	102	24	**TNP / AT**
Bydgoszcz II	Hard coal	177	76	17	12	3	**DH / AT**
Czechnica	Hard coal	100	27	7	5	1	**DH / AT**
Skawina	Hard coal	532	131	27	19	4	**TNP**
Stalowa Wola	Hard coal	250	91	19	13	3	**LLD / AT**
Pomorzany	Hard coal	134	44	11	7	2	**LLD / AT**
Miechowice	Hard coal	119	22	4	3	1	**DH**
Siersza	Hard coal	787	97	31	21	5	**LLD**
Adamow	Lignite	600	274	71	52	15	**LLD / AT**
Tychy	Hard coal	40	11	7	5	1	**TNP**
Zeran	Hard coal	386	147	44	30	7	**LLD / TNP / AT**
Wroclaw	Hard coal	263	89	21	14	3	**TNP**
Zabrze	Hard coal	74	35	5	4	1	**DH / AT**
Zofiowka Moszczenica	Hard coal	40	8	2	1	0	**DH**
Patnow II	Lignite	442	45	42	32	9	**TNP**
Bedzin	Hard coal	78	49	9	6	2	**TNP**
Gdansk 2	Hard coal	235	79	20	14	3	**TNP**
Gdynia	Hard coal	105	43	13	9	2	**LLD / TNP / AT**
Lagisza	Hard coal	820	134	54	37	9	**LLD / AT**
Jaworzno 3	Hard coal	1,345	173	108	75	18	**AT**
Katowice	Hard coal	135	35	15	11	3	**TNP**
Bialystok	Hard coal	110	18	13	9	2	**TNP**
Patnow II	Lignite	1,200	169	103	77	22	**TNP**
Konin	Lignite	248	31	12	9	2	**TNP**
Kozienice	Hard coal	2,919	652	183	126	30	**TNP / AT**
Krakow	Hard coal	460	128	33	23	5	**AT**

[46] Lifting Europe's Dark Cloud – How cutting coal saves lives, EEB 2016, See p.42

Direct health impacts of coal burning in Poland

- In 2013, coal power plants accounted for 1/3 of SO2 emissions in Poland, and for 1/4 NOx emissions.[47]
- Applying the stricter Best Available Techniques (BAT) on coal power plants would lead to significant emission reductions, and consequently, a reduction in the number of premature deaths from 5820 in 2013 to 430, and in the number of days of children suffering from asthma symptoms from 127 580 to 10 050 with the BAT.[48]
- Deaths from respiratory system causes in the period from 1973 to 2011, constituted an average of 5% of all deaths per year in Poland, and since 1980, the number of deaths from tracheal, bronchial and lung cancer has been increasing (from 17.1 to 27.4 cases of lung cancers per 10,000. residents).[49]
- During the smog alert between the 02nd-15th of January 2017, the Hospital Rescue Department of the Military Medical Institute reported - 50% more patients with exacerbation of COPD - 30% more patients with atrial fibrillation. In the Silesian Center for Heart Diseases, during the smog episodes, the number of deaths increased by 6%, and increased mortality was also recorded within several days of the smog episode.[50]
- Besides, results from a study conducted in Silesia indicated that when the average daily dust PM2.5 exceeded (200 µg / m3), the overall mortality rate increased by 6%, while deaths due to cardiovascular reasons increased by 8%. There was also an increase in the number of cases of myocardial infarction by 12%, stroke by 16%, pulmonary embolism by 18%, hospitalization due to atrial fibrillation by 24% and more frequent visits in primary care by 14%.[51]
- An investigation of the European Environmental Bureau into new European industrial pollution data has revealed an enormous 87.5% rise in toxic mercury emissions from Polish coal-fired power plants. The Bełchatów power plant in Poland emits more mercury into the air than the entire Spanish industry combined.[52]
- The highest concentrations of benzoapyrene in the air are recorded in Poland. This pollutant negatively affects the liver, kidneys and testes, destroying sperm, reduces reproductive capacity, and is very carcinogenic.[53]

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[47] Clearing the Air – A critical guide to the new NEC directive, EEB, 2017. See p.41-42 - Annex II – How phasing-out coal could help achieve the 2030 SO2 and Nox NERCs

[48] Lifting Europe's Dark Cloud – How cutting coal saves lives, EEB, Heal, CAN-EU, WWF, Sandbag, October 2016. See p.34-36 https://www.wwf.de/fileadmin/fm-wwf/Publikationen-PDF/Lifting_Europe_s_Dark_Cloud.pdf

[49] Wpływ zmiany klimatu na zdrowie (The impact of climate change on health), Koalicja Klimatyczna and HealPolska, 2018. See p.29 http://www.koalicjaklimatyczna.org/theme/UploadFiles/Wplyw_zmiany_klimatu_na_zdrowie_ost2.pdf

[50] Skutki zdrowotne oddychania zanieczyszczonym powietrzem, See slide 7 https://fluid.is.pcz.pl/ckfinder/userfiles/files/NiskaEmisja/HalkiewiczJoanna.pdf

[51] The studies compiled data from the Silesian Cardiac-Vascular Base, data on mortality and data on concentrations of air pollutants from the Voivodship Inspectorate for Environmental Protection in Katowice. The scope of research covered almost 10 years (2006-2014) and a sample of over 500,000 people. Wpływ zmiany klimatu na zdrowie (The impact of climate change on health), Koalicja Klimatyczna and HealPolska, 2018. See p.29 http://www.koalicjaklimatyczna.org/theme/UploadFiles/Wplyw_zmiany_klimatu_na_zdrowie_ost2.pdf

[52] META, The News Channel of the European Environmental Bureau. See https://metamag.org/2018/05/30/jump-in-toxic-mercury-emissions-from-german-and-polish-coal/

[53] Wpływ zmiany klimatu na zdrowie (The impact of climate change on health), Koalicja Klimatyczna and HealPolska, 2018. See p.29

The climate-induced impacts of air pollution on children's health in Poland

Six Polish power plants are ranked among the 30 most CO2 emitting coal power plants in Europe. The worst one in Europe is Bełchatów, responsible for 37,1 Mt CO2 emissions (2013).[54]

- Although one can observe a significant drop in the level of GHG emission between 1988 and 2002 in Poland, it is important to note the rise of GHG emissions since 2014.

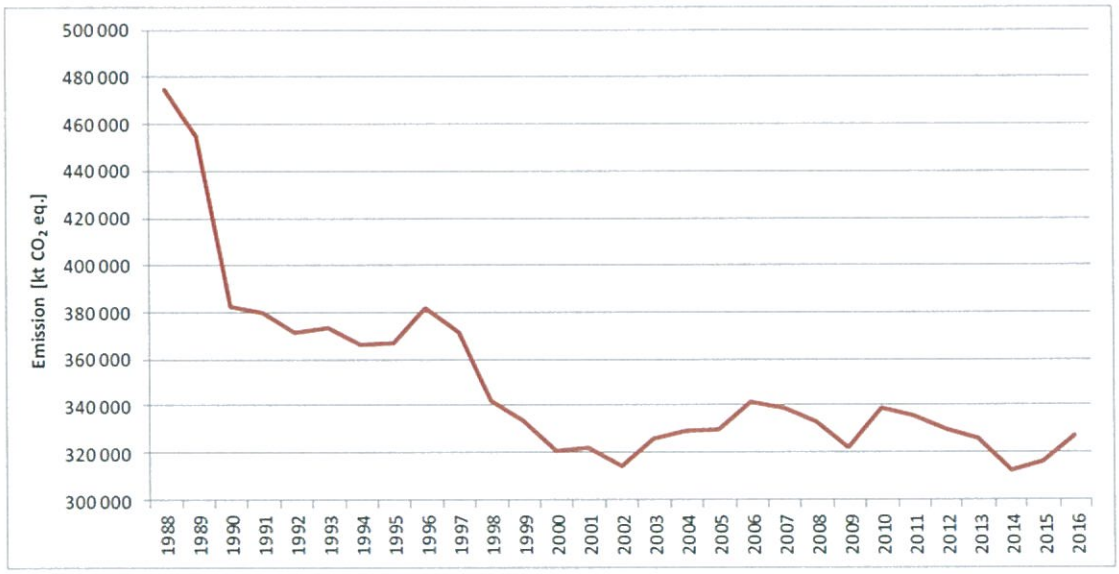

Figure 3.1.1. GHG emission trend in period 1988-2016 in sector *Energy*

National Inventory Report – Poland 2018[55]

- Changing climactic conditions contribute to the increase in the tick population and the widening of their territory. This is expected to increase the incidence of Lyme disease by the year 2100 from 58% to 68% (38-41 cases per 100,000).[56]
- An important threat to Poles will also be food-borne diseases and water. In winter, the number of patients suffering from salmonella infection is about 500 cases per month, and

[54] Europe's Dark Cloud – How coal-burning countries are making their neighbors sick, CAN Europe, HEAL, WWF European Policy Office, Sandbag, June 2016. See p. 36-37-38-39 https://www.env-health.org/IMG/pdf/dark_cloud-full_report_final.pdf

[55] National Inventory Report – Poland 2018. See p.41 http://www.kobize.pl/uploads/materialy/materialy_do_pobrania/krajowa_inwentaryzacja_emisji/NIR_2018_POL.pdf

[56] Wpływ zmiany klimatu na zdrowie (The impact of climate change on health), Koalicja Klimatyczna and HealPolska, 2018. See p.35 http://www.koalicjaklimatyczna.org/theme/UploadFiles/Wplyw_zmiany_klimatu_na_zdrowie_ost2.pdf

in the summer this increases up to 2,500 cases. Experts predict that it can significantly increase by the year 2100.[57]

- In terms of climate, carbon dioxide is responsible for the increase in the occurrence of allergies. This is in addition to high temperatures, which is responsible for the increased vegetation of plants, resulting in longer production and pollen allergenicity as well as humidity. In Poland, the number of allergy sufferers makes up about 30% of the population, and in the last decade the number of patients with allergic rhinitis and bronchial asthma has doubled. This causes high burdens for the health care system and the economy.[58]
- According to Dr Zielonka, Member of the Board of the Polish Society of Lung Diseases, the most vulnerable to climate change effects are the weakest – children, the elderly, suffering from chronic diseases, and poor and homeless people. Unfortunately, the Polish medical community still knows little about the impact of change on health.[59]
- A study conducted in Kraków in 2004 showed that an increase of exposure from 10 to 50 µg/m3 of PM2,5 would reduce length at birth by 1.0 cm, head circumference by 0,5cm and birth weight by 104,3g.[60]
- Similarly, a study between 1995-1997 compared the health of children living in the highly-polluted city centre of Kraków where coal stoves are more commonly used for home heating (around 53 ug/m3 particulate matter and between 32ug/m3 and 43ug/m3 SO2) with children living in a neighborhood with lower pollution levels (34ug/m3 particulate matter and between 22ug/m3 and 31ug/m3 SO2). The population sample studied prospectively over 2 years amounted to 1,001 children aged 9-11 years old. Both boys and girls from the higher pollution area showed lower lung function growth than those who lived in the less-polluted study area (table 3). [61]
- In addition, growth rate over 2 years in boys in this area was significantly lower than in those from the control area (10.2 vs. 11.5 cm); the same has been observed among girls (11.0 vs. 12.9 cm).[62]

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[57] Wpływ zmiany klimatu na zdrowie (The impact of climate change on health), Koalicja Klimatyczna and HealPolska, 2018. See p.31
http://www.koalicjaklimatyczna.org/theme/UploadFiles/Wplyw_zmiany_klimatu_na_zdrowie_ost2.pdf

[58] Wpływ zmiany klimatu na zdrowie (The impact of climate change on health), Koalicja Klimatyczna and HealPolska, 2018. See p.29
http://www.koalicjaklimatyczna.org/theme/UploadFiles/Wplyw_zmiany_klimatu_na_zdrowie_ost2.pdf

[59] http://healpolska.pl/aktualnosci/zdrowie-polakow-zagrozone-przez-zmiane-klimatu-nowy-raport-heal-i-koalicji-klimatycznej/ (Health of Poles threatened by climate change – new report)

[60] Wieslaw Jedrychowski, Ivona Bendkowska, Elzbieta Flak, Agnieszka Penar, Ryszard Jacek, Irena Kaim, John D. Spengler, David Camann, and Frederica P. Perera Estimated Risk for Altered Fetal Growth Resulting from Exposure to Fine Particles during Pregnancy: An Epidemiologic Prospective Cohort Study in Poland Environ Health Perspect. 2004 Oct; 112(14): 1398–1402. Published online 2004 Jun 21. doi: 10.1289/ehp.7065 See abstract: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1247567/

[61] Wieslaw Jedrychowski, Elzbieta Flak, and Elzbieta Mróz, Chair of Epidemiology and Preventive Medicine, Collegium Medicum in Jagiellonian University, Kraków, Poland, The Adverse Effect of Low Levels of Ambient Air Pollutants on Lung Function Growth in Preadolescent Children, Environmental Health Perspectives, Volume 107, Number 8, August 1999. See table 3 p.671:
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1566490/pdf/envhper00513-0101.pdf

[62] Wieslaw Jedrychowski, Elzbieta Flak, and Elzbieta Mróz, Chair of Epidemiology and Preventive Medicine, Collegium Medicum in Jagiellonian University, Kraków, Poland, The Adverse Effect of Low Levels of Ambient Air Pollutants on Lung Function Growth in Preadolescent Children, Environmental Health Perspectives, Volume 107, Number 8, August 1999. See table 3 p.671:
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1566490/pdf/envhper00513-0101.pdf

ClientEarth

1/08/2018

Ambient Air Quality Directive 2008/50/EC – case C-336/16

- It should be noted that in its recent judgment[63] (dated on 22/02/2018) Court of Justice of EU stated that Poland has failed to fulfill its obligations under Article 13(1) and the second subparagraph of Article 23(1), and Article 22(3) of the Air Quality Directive 2008/50/EC. Since 2007 and up to 2015 inclusively, the daily limit values for particulate matter PM10 concentrations were exceeded in 35 zones for the assessment and management of ambient air quality and the annual limit values for particulate matter PM10 concentrations were exceeded in 9 zones. Moreover, no appropriate measures have been incorporated in ambient air quality programmes to ensure that the exceedance period of particulate matter PM10 concentrations limit values is kept as short as possible
- This case is a result of years of failure of the air quality improvement policies conducted by the polish authorities as well as an indication of the incorrectly determined energy policy where the main source of electricity and heat is still coal.

Yours Faithfully,

Marcin Stoczkiewicz
President of the Management Board
Foundation ClientEarth Prawnicy dla Ziemi

[63] Case C-336/16 EU Commission v Poland