

Anežka Konvalinová

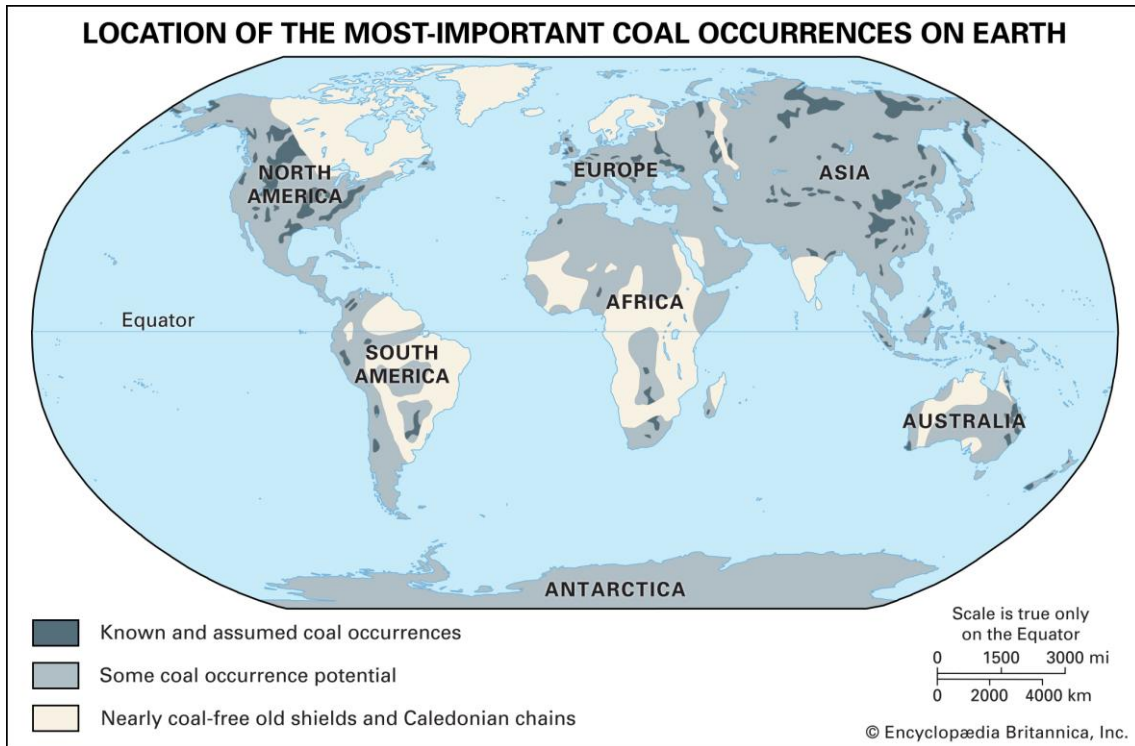
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23.11.2021



# Radical (non)approach to renewable energy: Poland

# Outline



Role of Coal

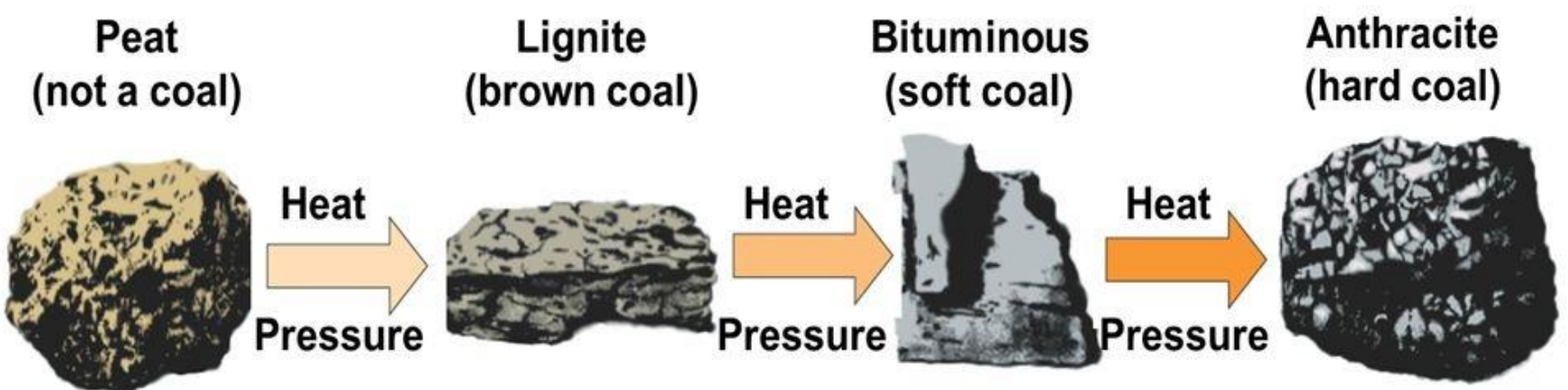
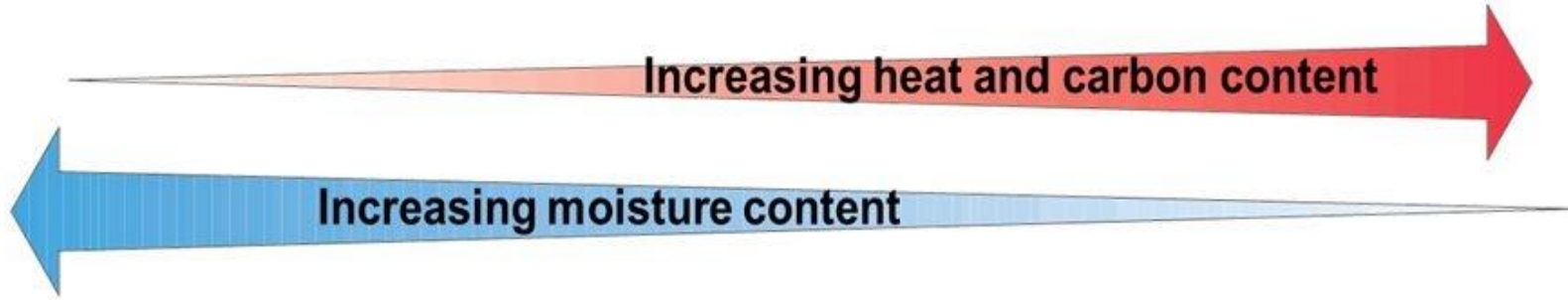
Coal phase-out policies

Just Transition

Poland

Turow dispute – debate

[https://www.youtube.com/watch?v=iN6LvH\\_4Q3g](https://www.youtube.com/watch?v=iN6LvH_4Q3g)



Partially decayed plant matter in swamps and bogs; low heat content

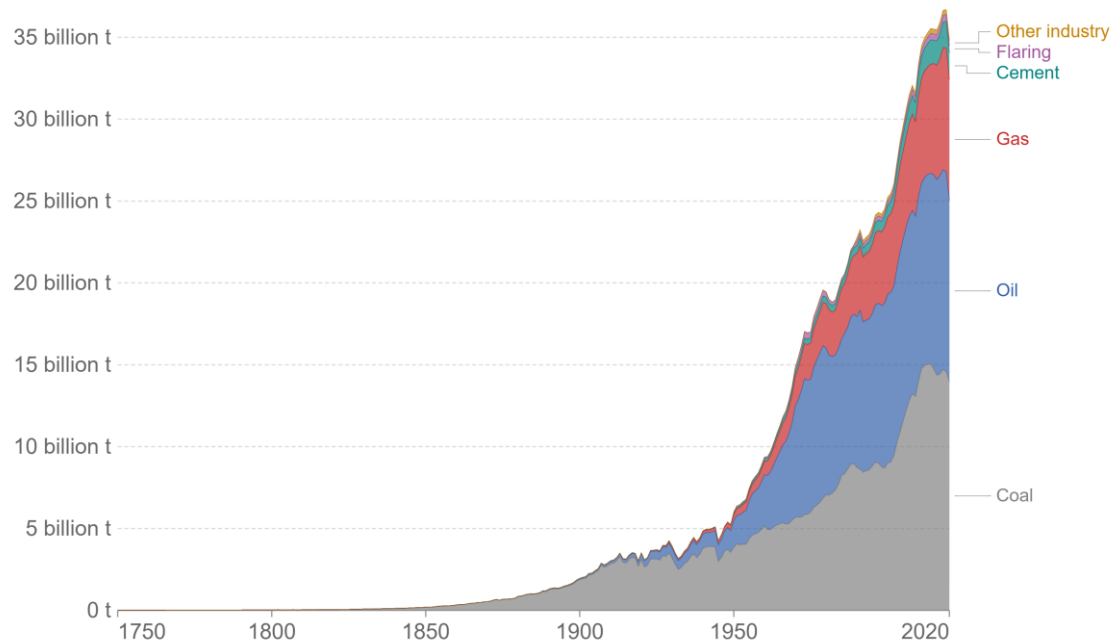
Low heat content; low sulfur content; limited supplies in most areas

Extensively used as a fuel because of its high heat content and large supplies; normally has a high sulfur content

Highly desirable fuel because of its high heat content and low sulfur content; supplies are limited in most areas

## CO<sub>2</sub> emissions by fuel type, World

Annual carbon dioxide (CO<sub>2</sub>) emissions from different fuel types, measured in tonnes per year.



Source: Global Carbon Project

OurWorldInData.org/co2-and-other-greenhouse-gas-emissions/ • CC BY

# Role of Coal

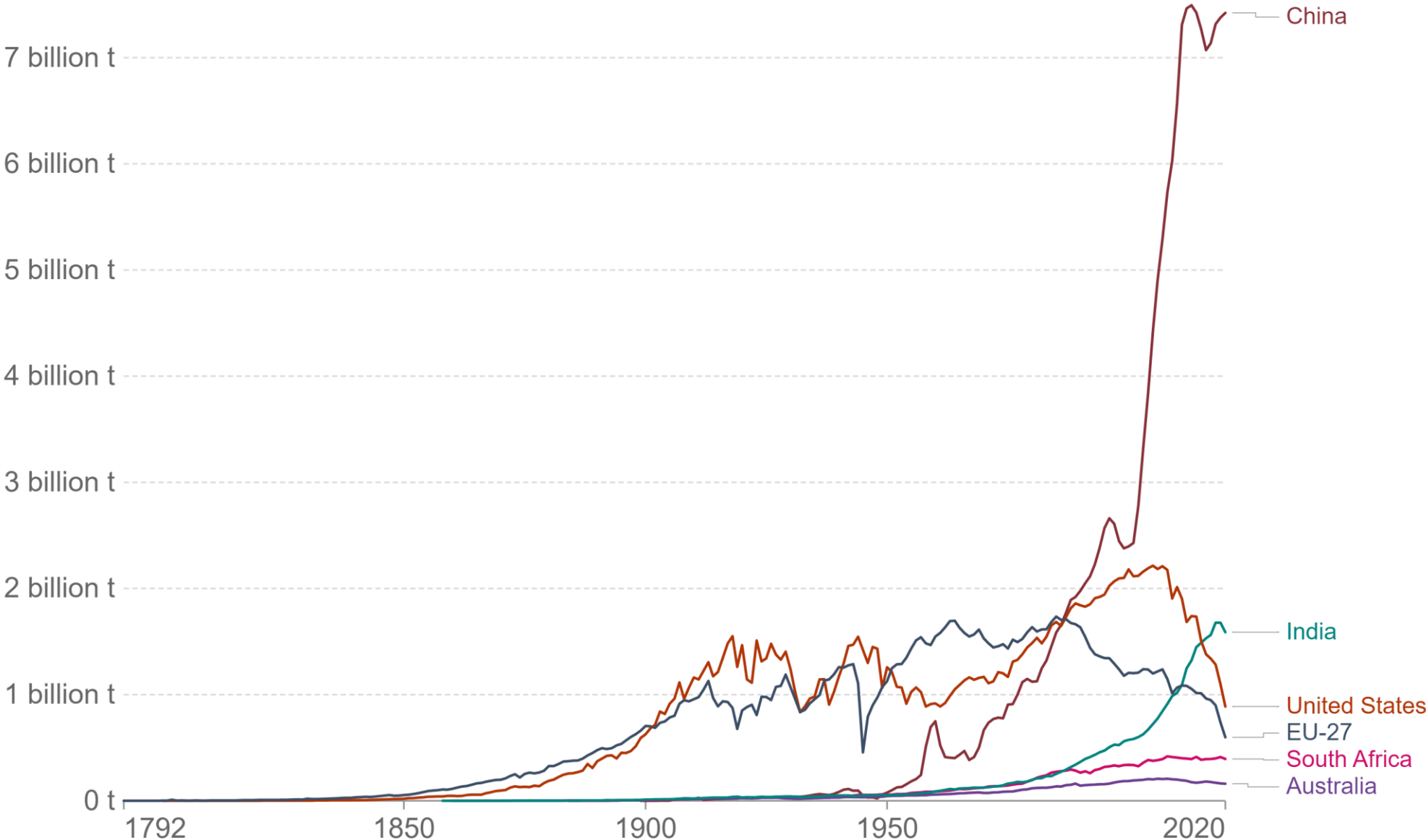
Long history of usage

Fueled industrial revolution and modern economy

Significant role in shaping modern social policies and left/socialist/communist movements

Enormous environmental impacts

# Annual CO<sub>2</sub> emissions from coal

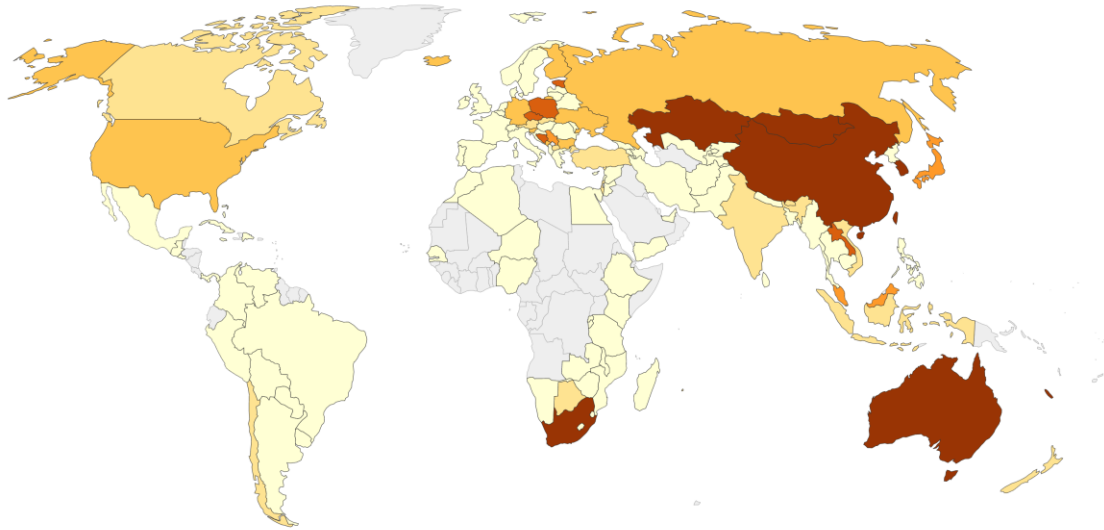


Source: Global Carbon Project



# Per capita CO2 emissions from coal

Our World  
in Data

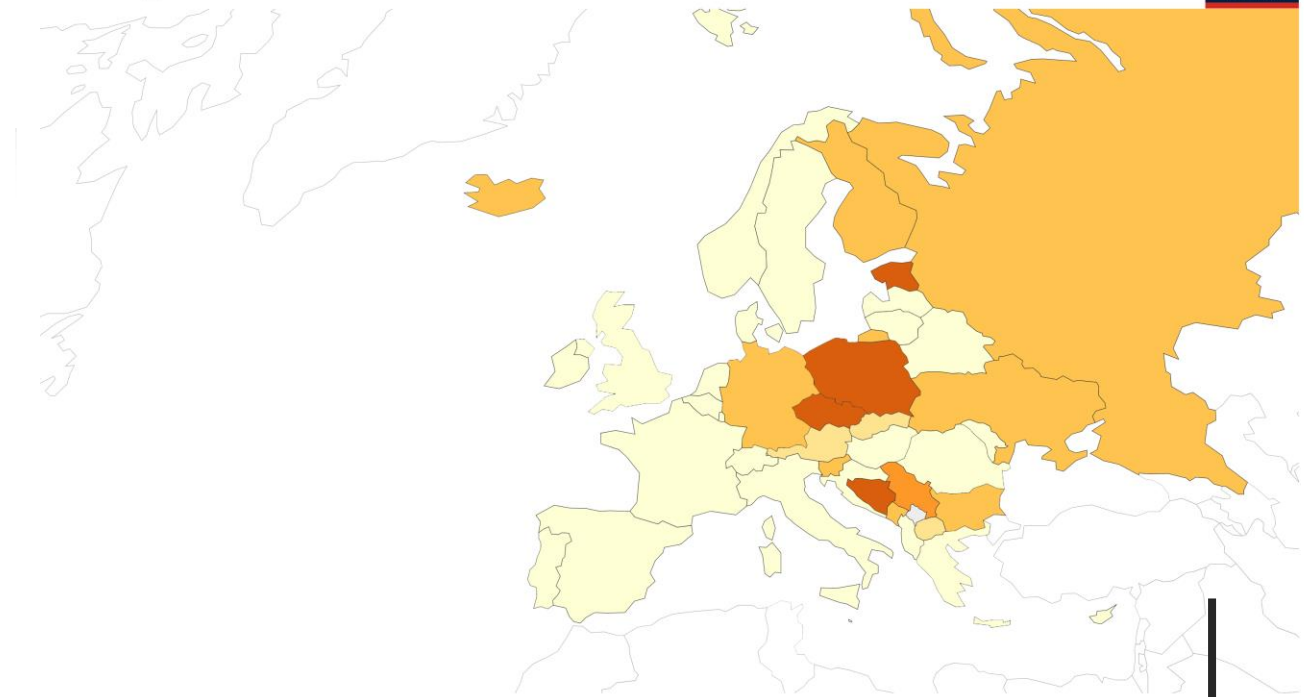


Source: Our World in Data based on the Global Carbon Project

OurWorldInData.org/co2-and-other-greenhouse-gas-emissions • CC BY

# Per capita CO2 emissions from coal

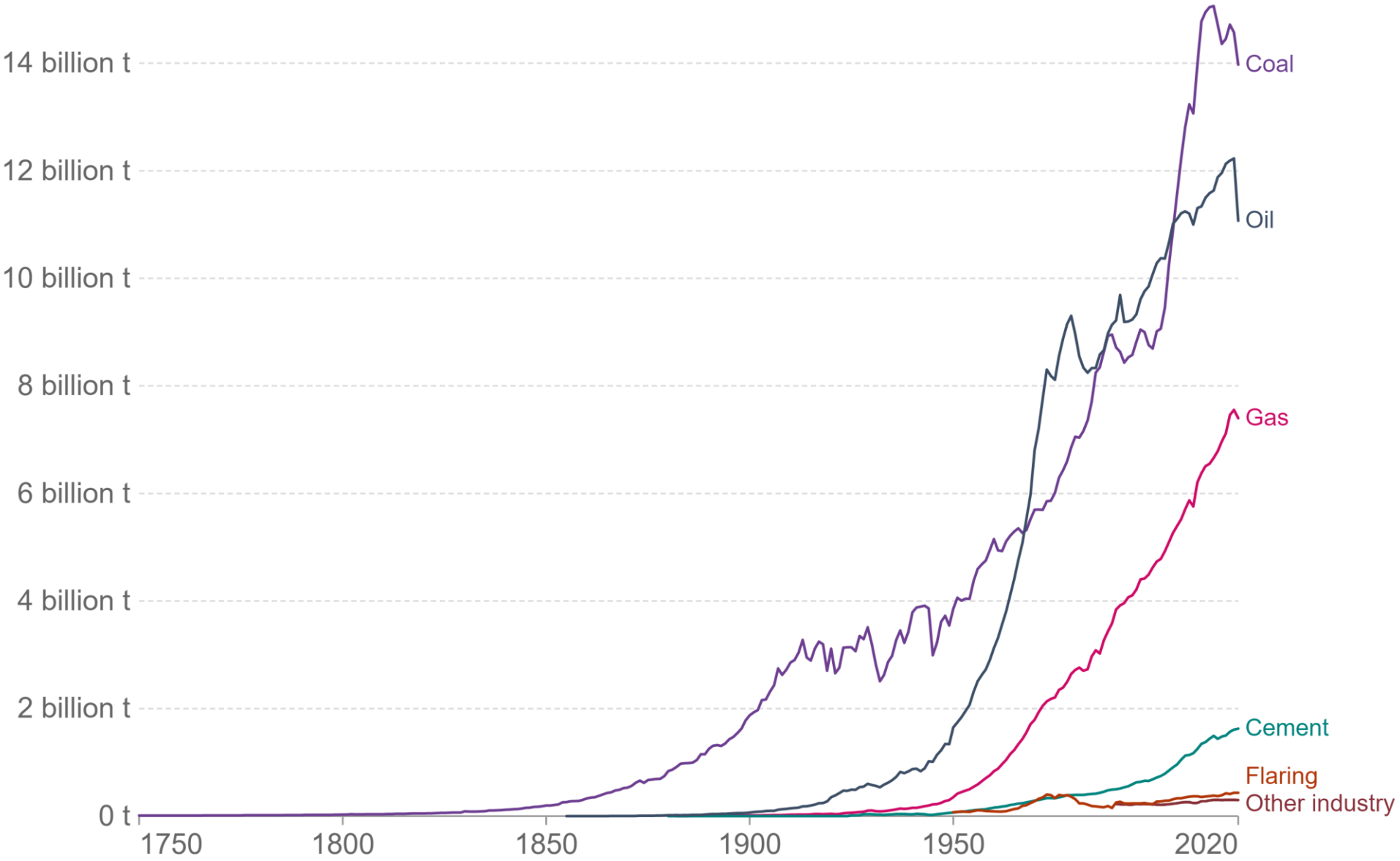
Our World  
in Data



Source: Our World in Data based on the Global Carbon Project

OurWorldInData.org/co2-and-other-greenhouse-gas-emissions • CC BY

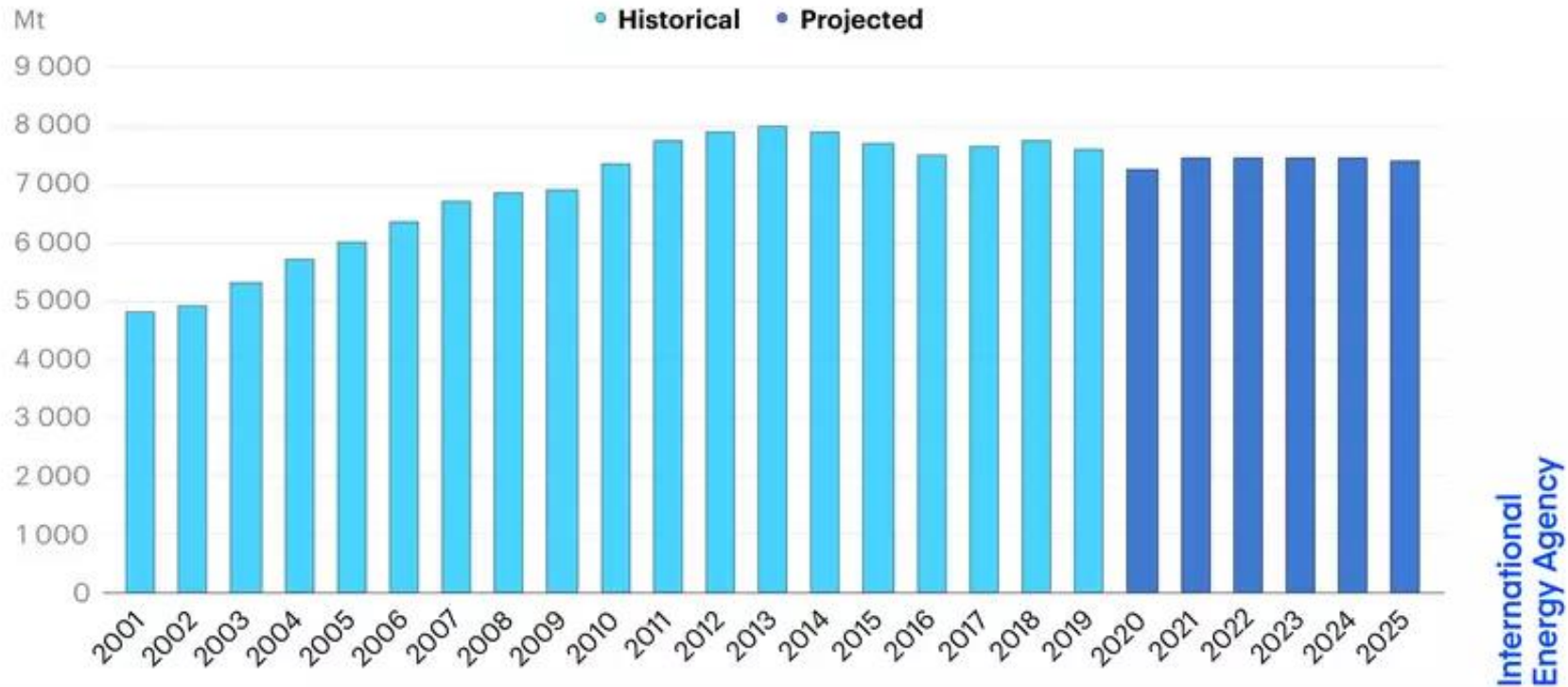
# CO2 emissions by fuel, World



Source: Global Carbon Project

## Global coal demand, 2001-2025

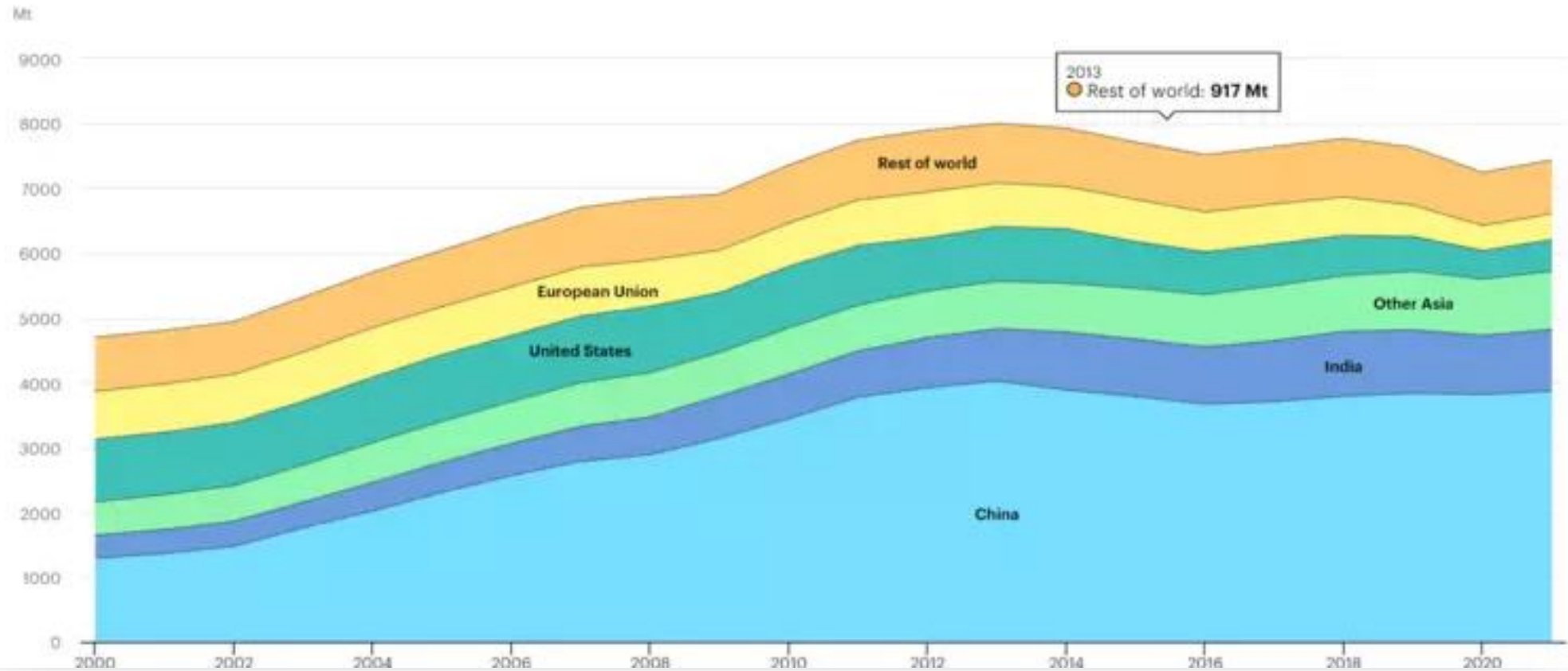
Coal 2020



Increasing demand

Coal still largest source of primary energy supply after oil





Power sector demand largely responsible

Asia Pacific region consumes 73% of the world's coal, responsible for almost all the growth

Decrease in the EU and US

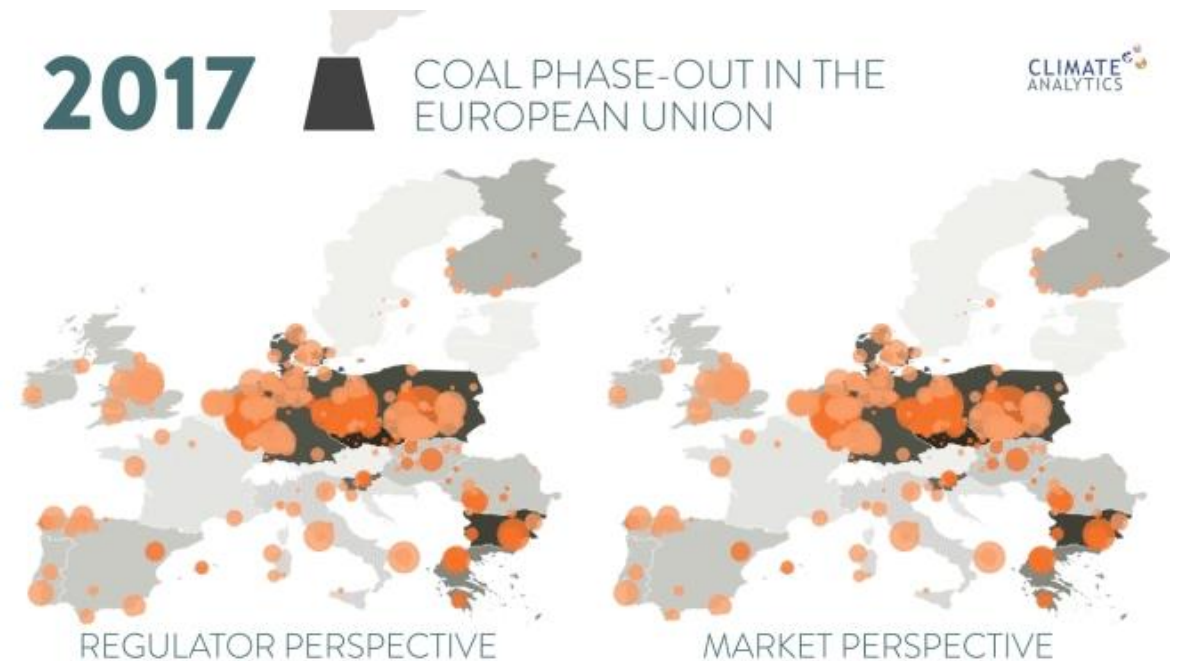
New production records in India, Indonesia, Russia

# Coal Phase-out

The EU is committed to decarbonizing its energy mix  
- coal as number one victim

Increasing pressure on Member states

Climate policies vs. socio - economic impacts of energy transition





*“We must show solidarity with the most affected regions in Europe, such as coal mining regions and others, to make sure the Green Deal gets everyone’s full support and has a chance to become a reality.”*

**Frans Timmermans, Executive Vice-President of the European Commission**

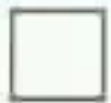
## Just Transition

The Just Transition Mechanism (JTM) is a key tool to ensure that the transition towards a climate-neutral economy happens in a fair way, leaving no one behind

€55 billion over the period 2021-2027 in the most affected regions, to alleviate the socio-economic impact of the transition

The Just Transition Fund (JTF) is the first pillar of the Just Transition Mechanism (JTM)

# Meaning of the Polish Flag:



Russia



Germany

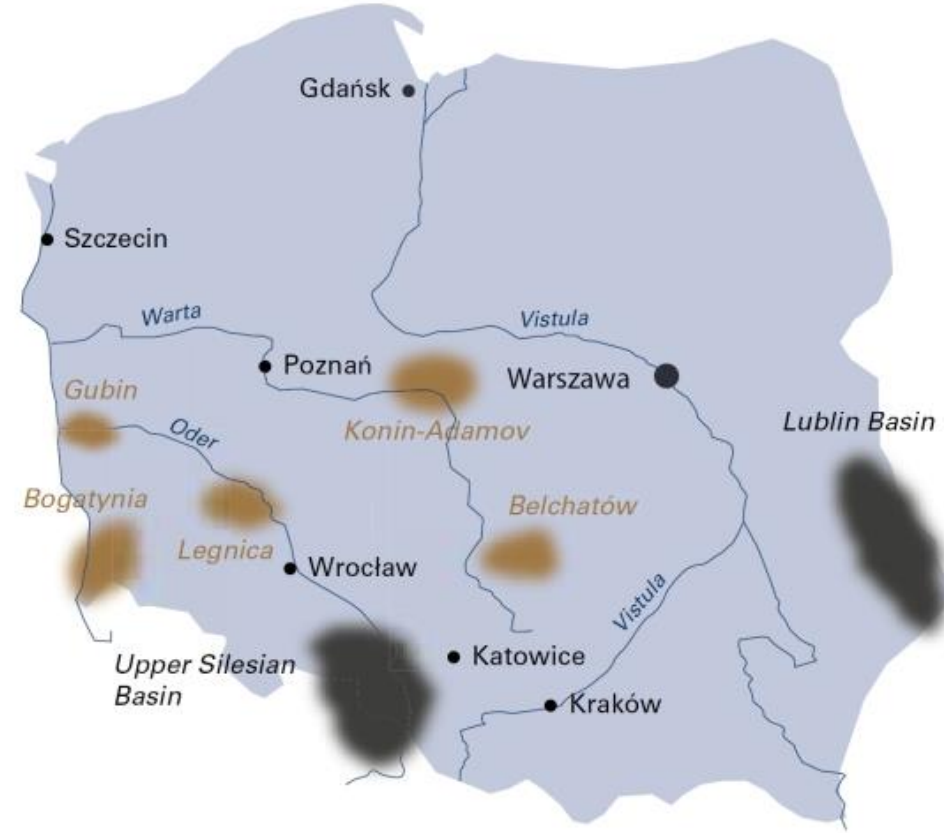
# Poland

Poland, the second-largest consumer of coal in the EU

Perceived as a hard-line defender of this fuel and climate-troublemaker within EU climate policy and decarbonization efforts.

The fundamental objective of Polish energy policy is to provide security, with competitiveness, economic efficiency, and environmental concerns being secondary

For Poland, being secure means being as independent from foreign supplies as possible, especially from Russian commodities

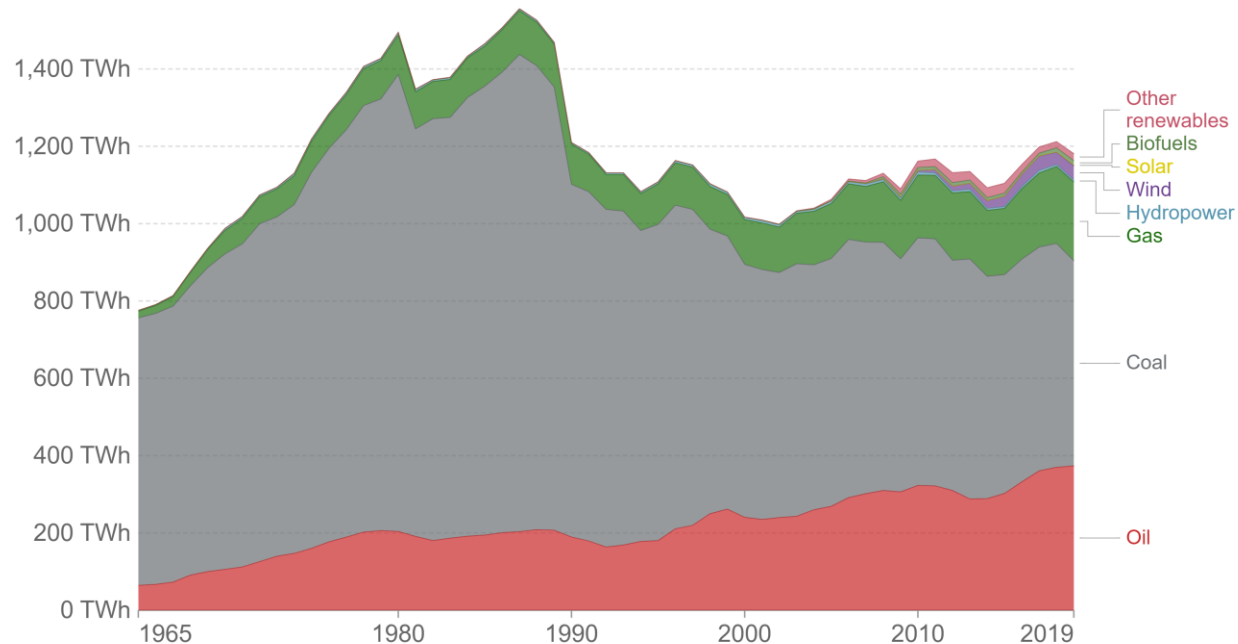


# Polska węglem stoi

## Energy consumption by source, Poland

Primary energy consumption is measured in terawatt-hours (TWh). Here an inefficiency factor (the 'substitution' method) has been applied for fossil fuels, meaning the shares by each energy source give a better approximation of final energy consumption.

Our World  
in Data



Source: BP Statistical Review of World Energy  
Note: 'Other renewables' includes geothermal, biomass and waste energy.

OurWorldInData.org/energy • CC BY

Coal produces around 93% of Poland's electricity

The coal mining industry employs around 100,000 people

Mining unions have special power position

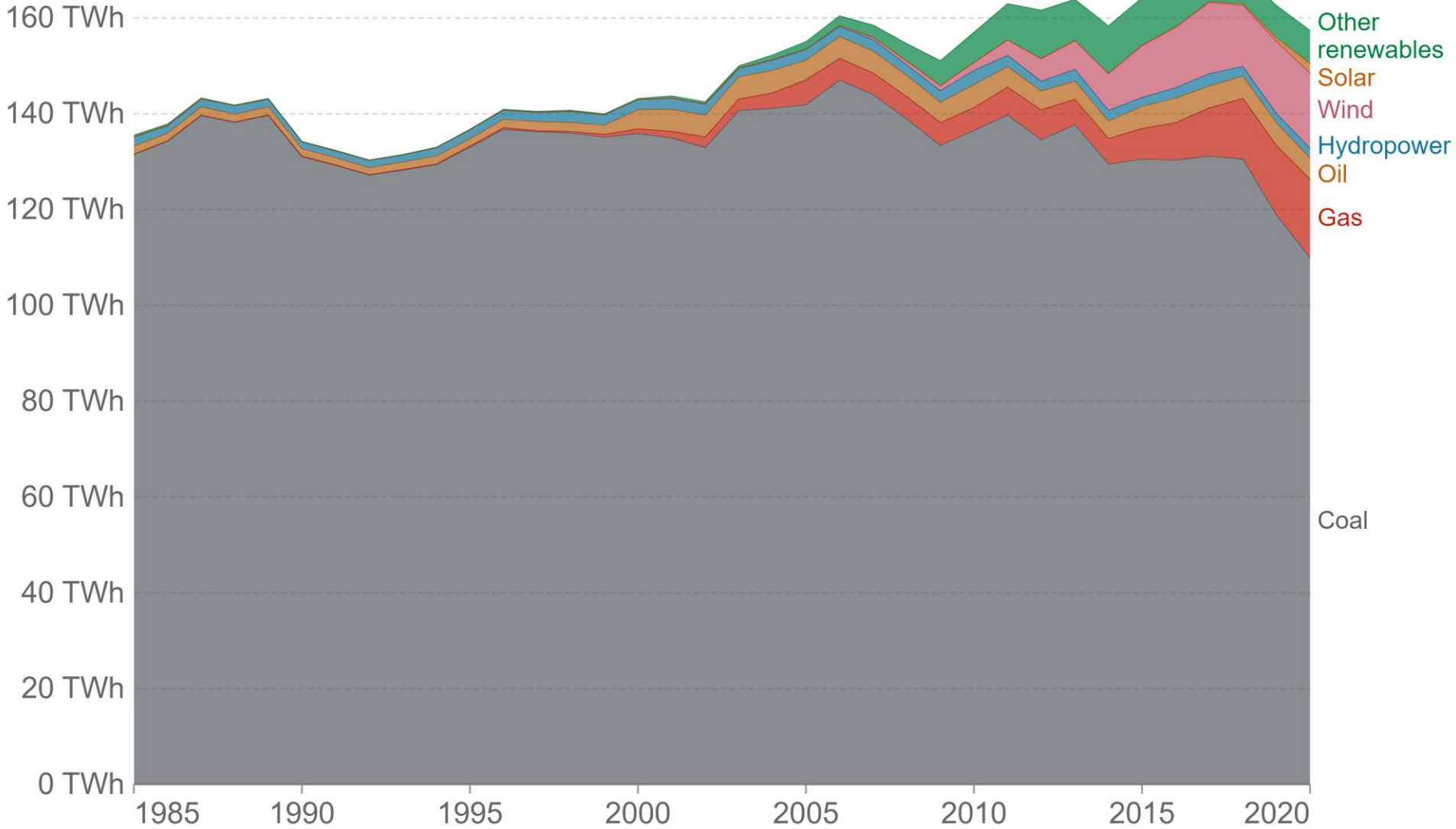
Barbórka

Electoral votes

Clean air initiative, local environmental opposition



# Electricity production by source, Poland



Source: Our World in Data based on BP Statistical Review of World Energy & Ember (2021)

*“Coal is our stabilizer and guarantor of energy security for our energy sector,”*  
claimed ex-Minister of Energy Tchórzewski in 2019 (Tchórzewski, 2019)

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<https://www.youtube.com/watch?v=Hq1cWMs3kl4>

<https://www.youtube.com/watch?v=VpiKcNOSEWc&t=102s>

[https://www.youtube.com/watch?v=\\_6ldMVfmXw0](https://www.youtube.com/watch?v=_6ldMVfmXw0)

# Poland under pressure

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EU pressure to phase-out coal

Low coal prices vs. high extraction costs

The problems of Polish coal sector

Kompania Weglowa, state own energy companies in trouble

Imports

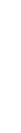
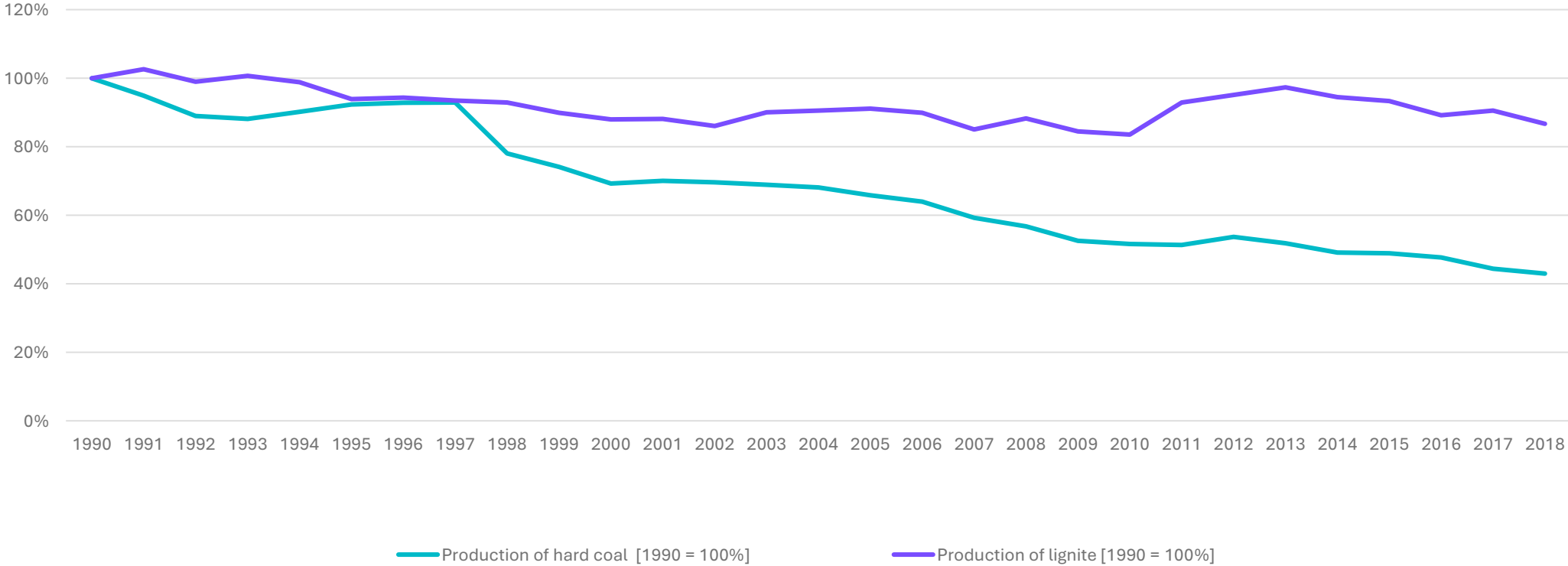
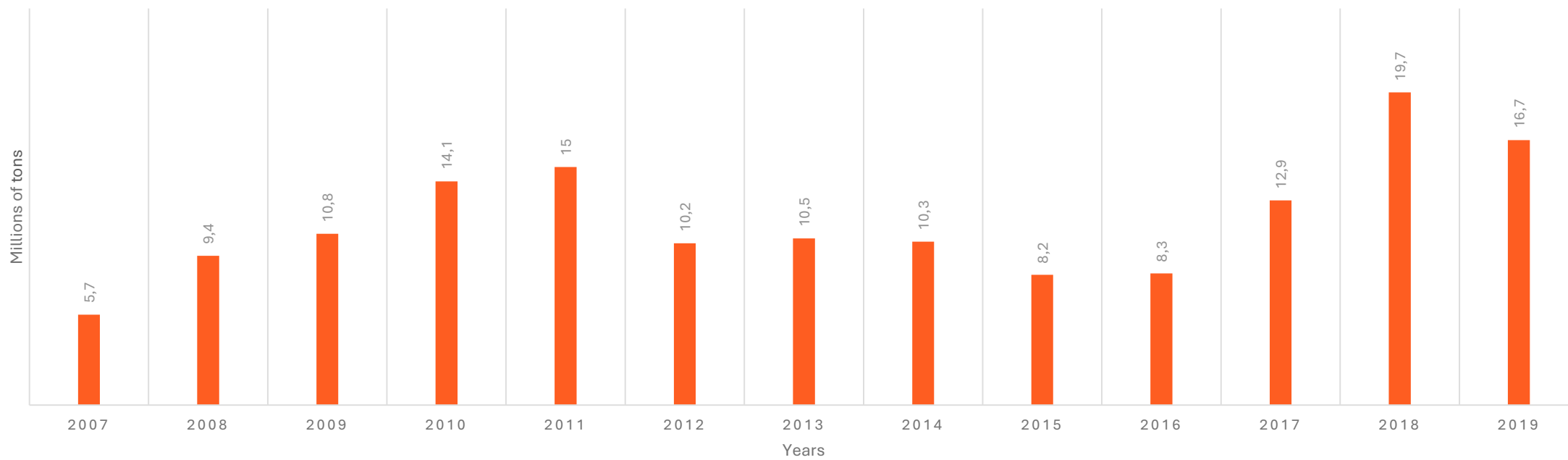


Figure 1. Total production of hard coal and lignite, 1990-2018



Source: Authors' own graph based on Eurostat data

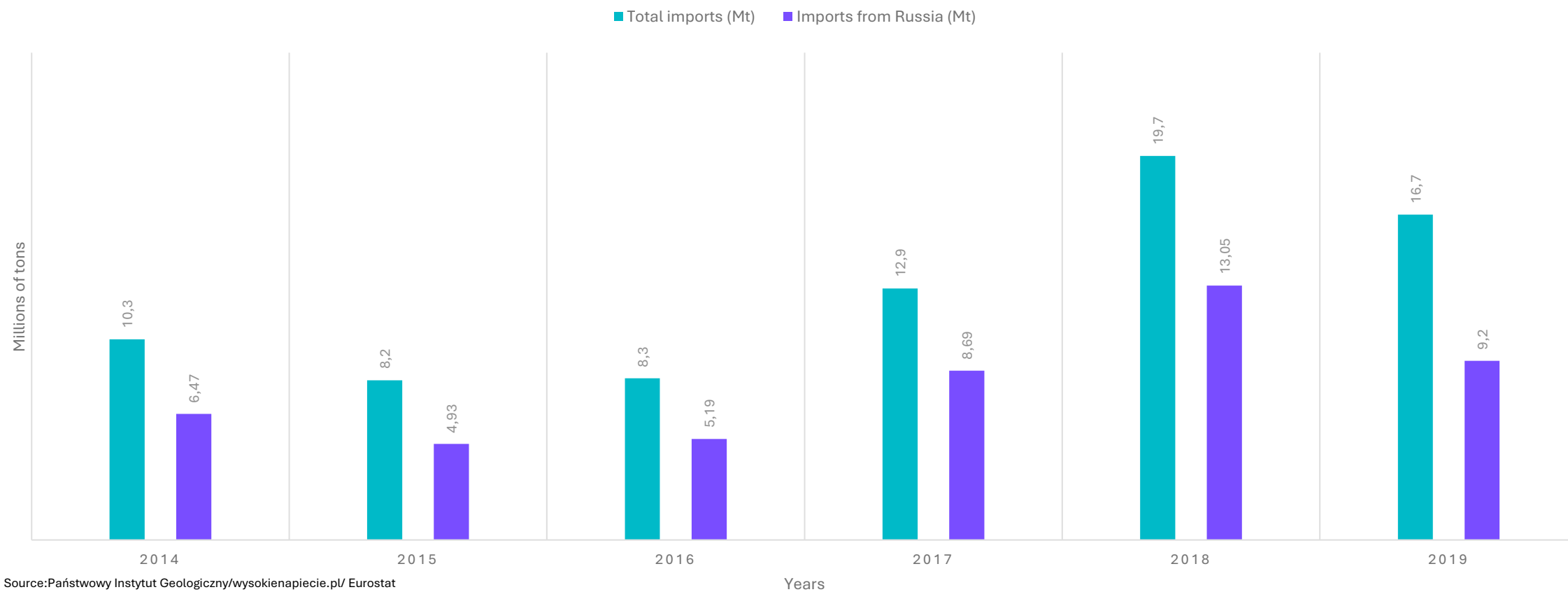
Figure 2. Total amount of hard coal imports to Poland



Source: Authors' own graph based on Program dla sektora górnictwa węgla kamiennego w Polsce /Eurostat



**Figure 3. Balance of coal imports**



Source:Państwowy Instytut Geologiczny/wysokienapiecie.pl/ Eurostat



# Poland 2.0?

The energy transition will be based on three pillars:



<b>I pillar</b> Just transition	<b>II pillar</b> Zero-emission energy system	<b>III pillar</b> Good air quality
Transition of coal regions Reduction of energy poverty New industries related to renewable energy and nuclear energy	Offshore wind energy Nuclear energy Local and civic energy	Heating transition Transport electrification Climate-friendly House

New PEP 2040

Nuclear ?

Offshore wind

Coal phase-out by 2049



# Turów dispute

<https://www.youtube.com/watch?v=tM1dqv1vDCQ>

Czechia waters vs Polish energy  
security

<https://turow2044.pl/en/homepage>



Who are the winners and losers of coal phase-out?



# Thank you for your attention!

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# Sources:

European Commission. 2021. Available at: [https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/finance-and-green-deal/just-transition-mechanism/just-transition-funding-sources\\_en](https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/finance-and-green-deal/just-transition-mechanism/just-transition-funding-sources_en)

Kuchler, M., & Bridge, G. 2018. Down the black hole: Sustaining national sociotechnical imaginaries of coal in Poland. *Energy Research & Social Science* (41). doi: 10.1016/j.erss.2018.04.014.

Longhurst, K., & Zaborowski, M. 2007. *The new atlanticist: Poland's foreign and security policy priorities*. London: Chatham House

Ministerstwo Klimatu. 2020. Nowy projekt Polityki energetycznej Polski do 2040 r. - Ministerstwo Klimatu i Środowiska - Portal Gov.pl. Retrieved December 8, 2020, from <https://www.gov.pl/web/klimat/projekt-polityki-energetycznej-polski-do-2040-r>

OurWorldinData.org

Tchórzewski, K. 2019. Duży import węgla do Polski jest przejściowy - górnictwo. Retrieved December 20, 2020, from <https://www.wnp.pl/gornictwo/krzysztof-tchorzewski-duzy-import-wegla-do-polski-jest-przejsciowy,342815.html>