

WP-B Training 20 Nov. – 1 Dec. 2022



Lubango, Angola

PanAfGeo

Pan-African Support
to Geological Sciences and
Technology Africa-EU Partnership

Appui panafricain aux géosciences
du partenariat Afrique-UE

Apoio pan-africano às geociências
da parceria África-UE

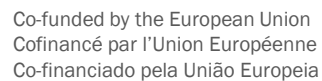
PanAfGeo -2 WP-B Avaliação do Potencial em Recursos Minerais: Geology and mineral resources of Poland: state of recognition and challenges for the geological survey

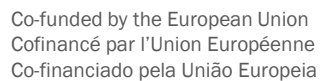
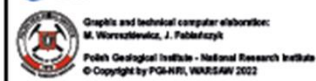
Stanisław Wołkowicz, Joanna Fajfer, Paulina Kostrz-Sikora, Olimpia Kozłowska,
Dominika Kafara, Joanna Krasuska, Anna Gabryś-Godlewska, Paweł Urbański
Polish Geological Institute

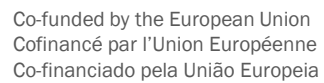
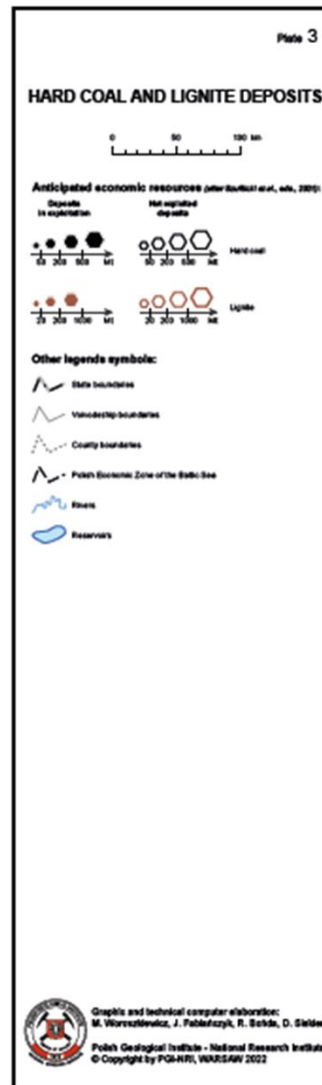


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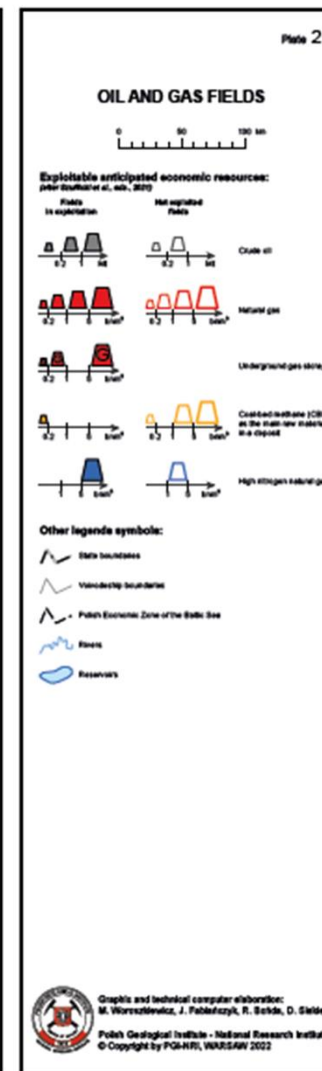
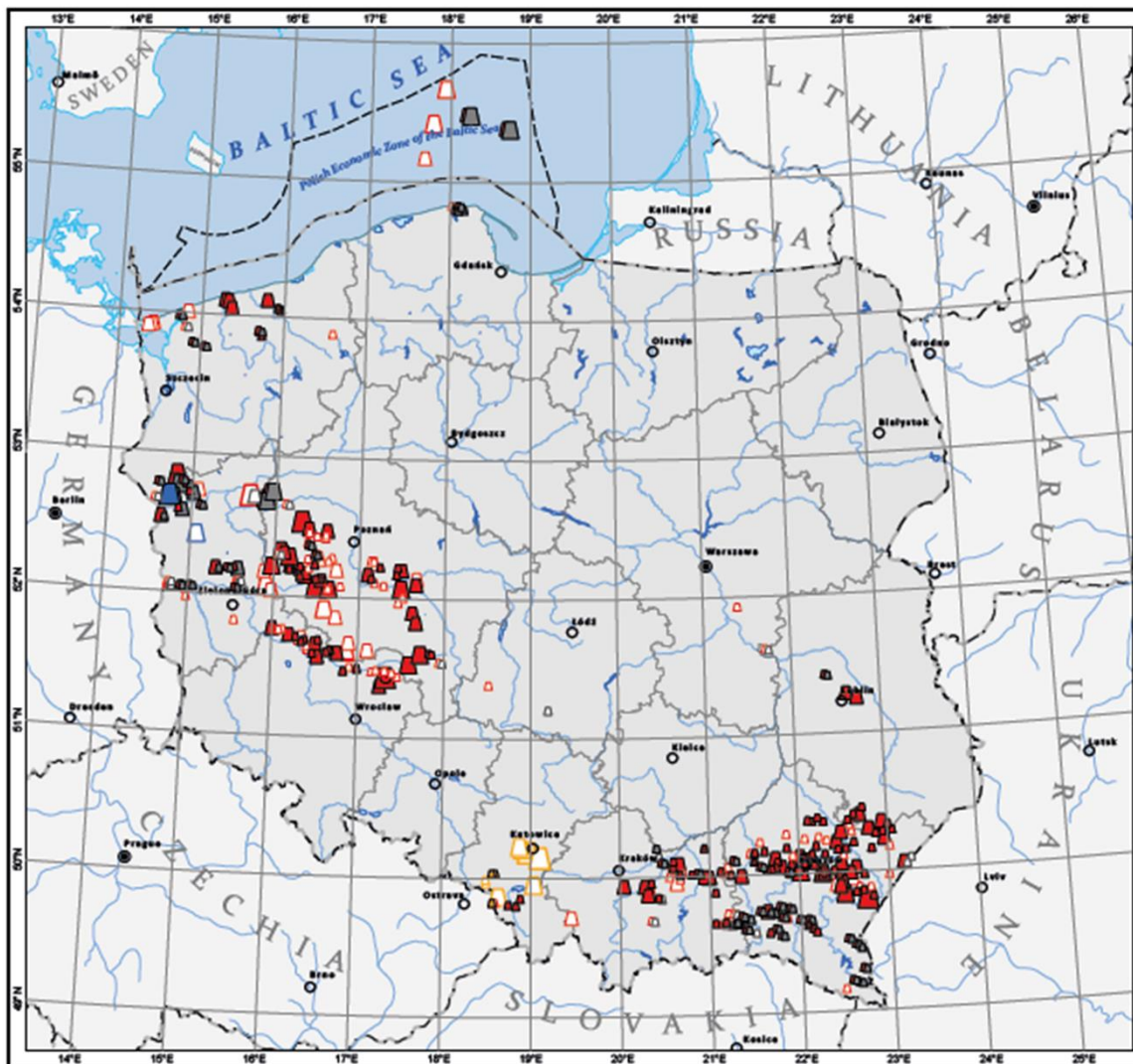








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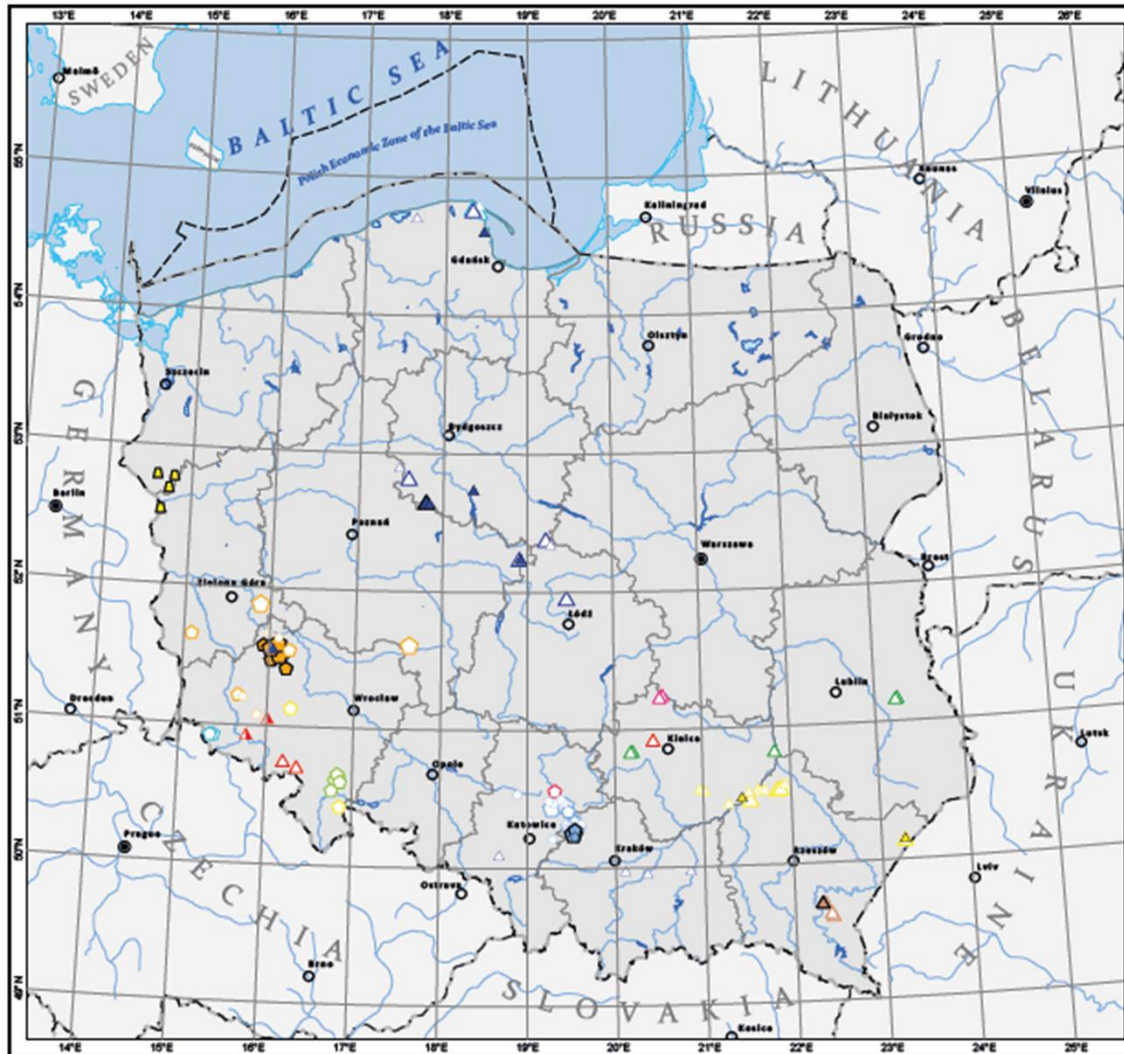


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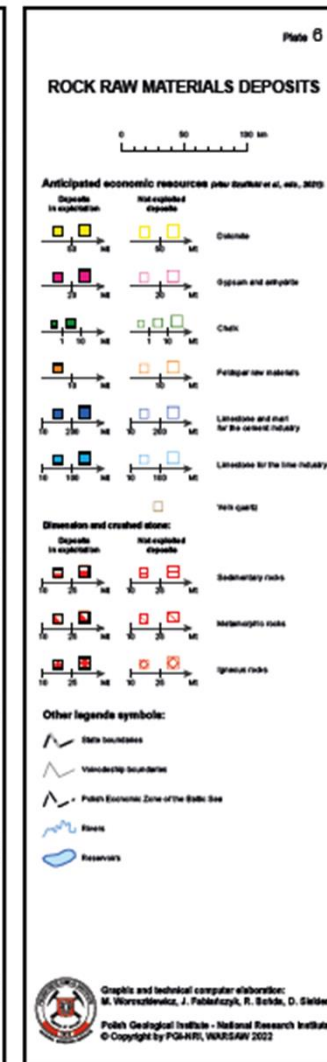
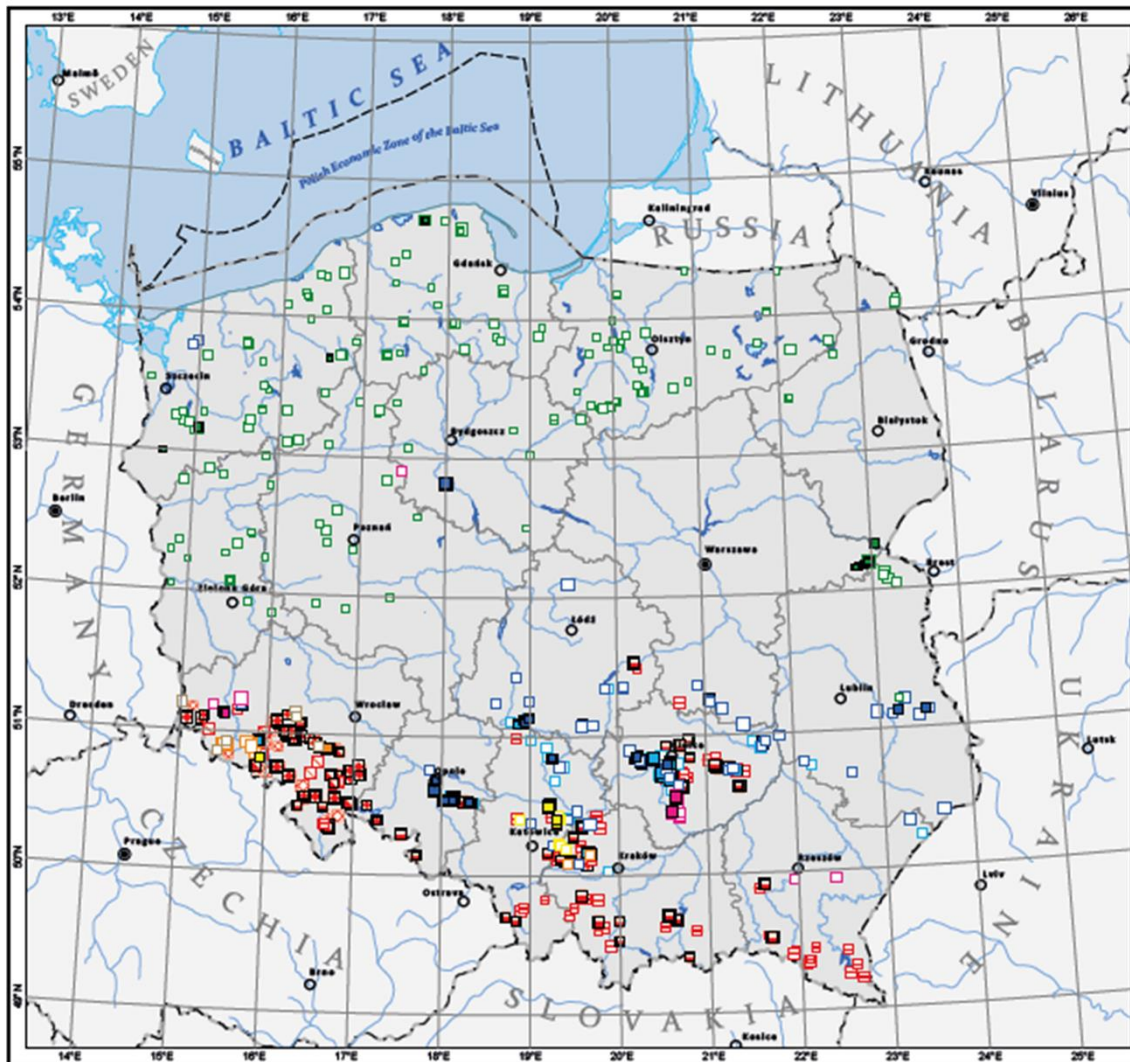


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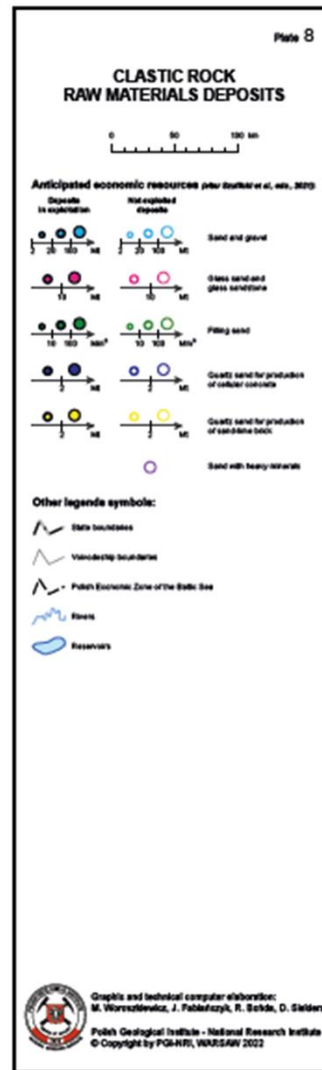
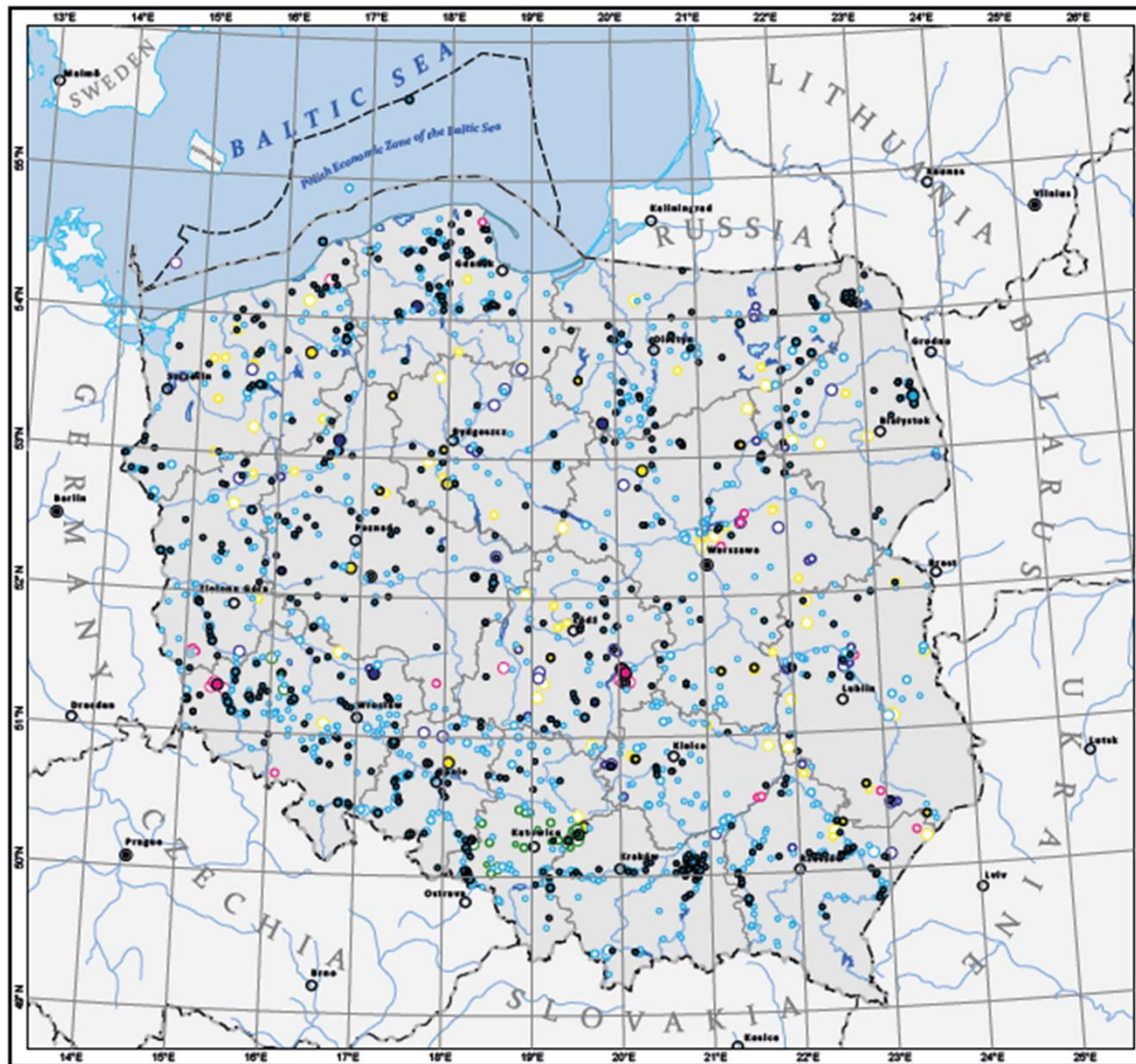


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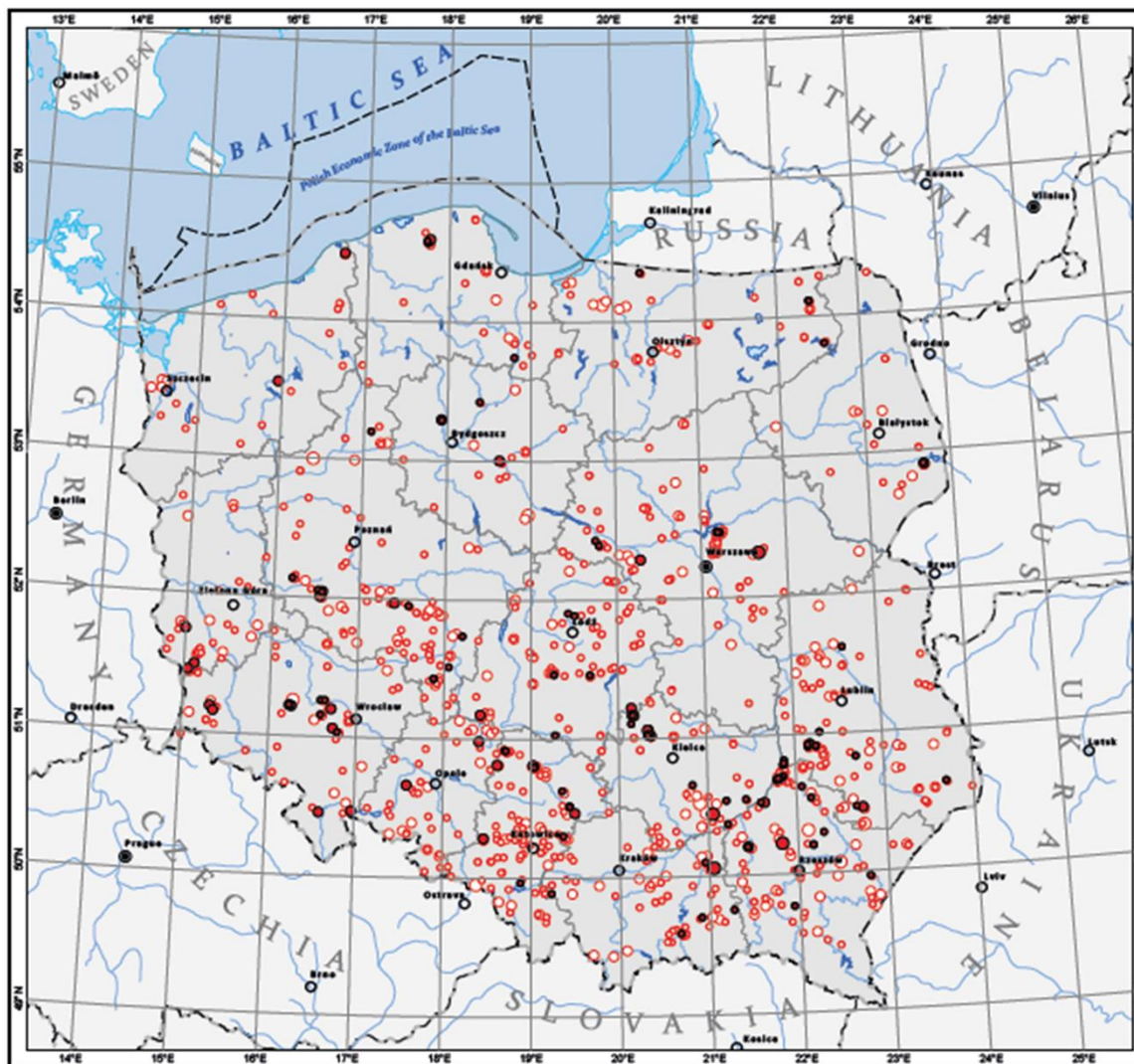


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How many documented deposits of mineral resources are there in Poland?

Mineral raw material	Number of deposits	Documented resources mln Mg, bln m ³	Extraction Mln Mg, bln m ³
Energy raw materials:	701	Mixed units	Mixed units
- Gas, including CBM	363	242.0	5.25
- Crude oil	86	23.5	0.94
- Brown coal	91	23 315	61.2
- Hard coal	161	62 436	63.9
Metallic raw materials:	33	2 540	
- Zn-Pb ores	20	84.0	
- Cu-Ag ores	12	1 905	32.2
- Mo-W-Mo ores	1	550.8	
Chemical raw materials:	50	91 547	4.77
- Sulfur	19	502.9	0.64
- K-Mg salts	5	686.2	0
- Rock salt	19	90351.9	4.13
- others	7		
Rock raw materials and others:	13 351	61 344.6	347.9
- Gypsum and anhydrite	15	255.2	1.1
- Sand and gravel	10 275	19 470.8	197.0
- Crushed and dimension stone	738	11 407.3	81.3
- Ceramic clays	1 148	4 704.3	4.1
- Limestones and marls for cement industry	181	18 173.3	47.0
- Others	994	7 333.7	17.4

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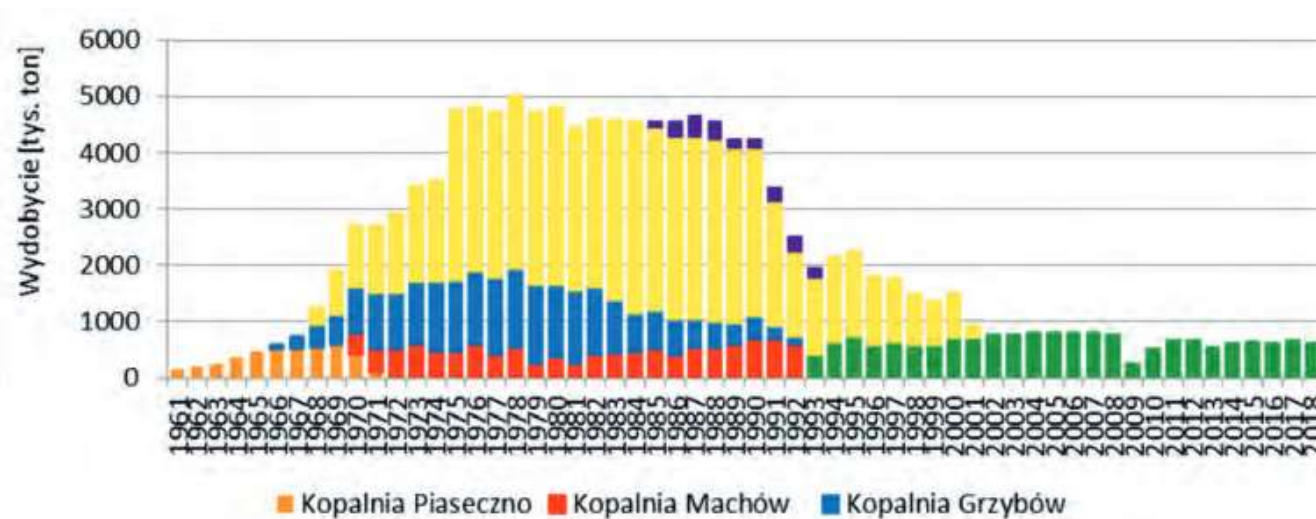




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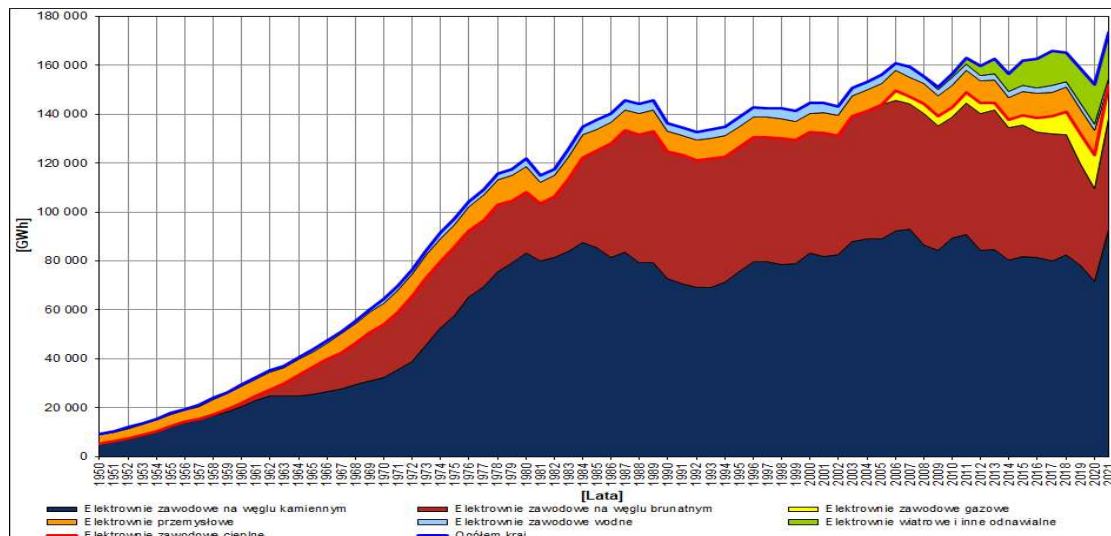
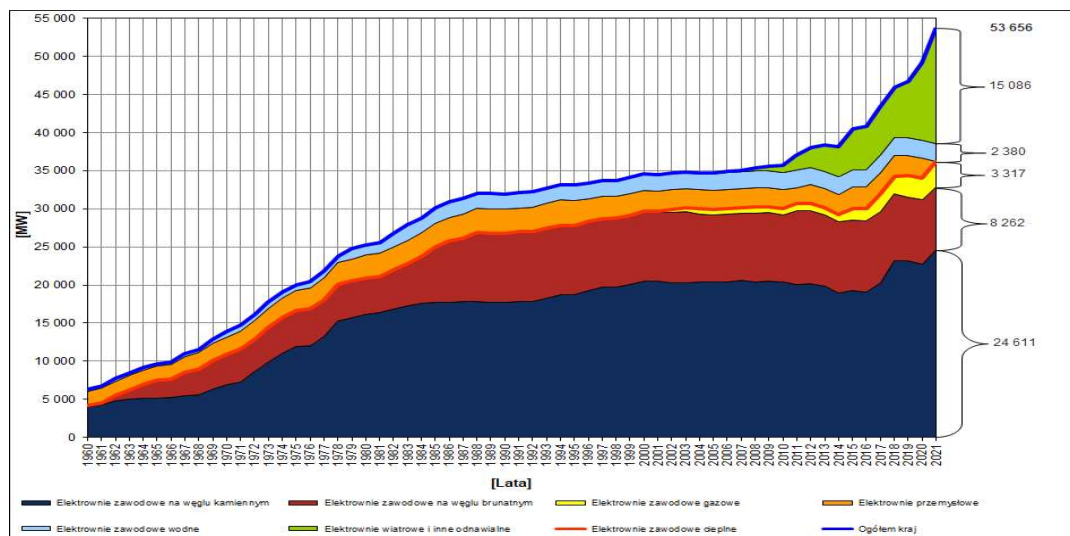


Green Deal Challenge: energy production and consumption in Poland

Dynamics of growth

installed power

electricity production (GWh)



in the years 1960-2021, by source

(Raport 2021 KSE, www.pse.pl)



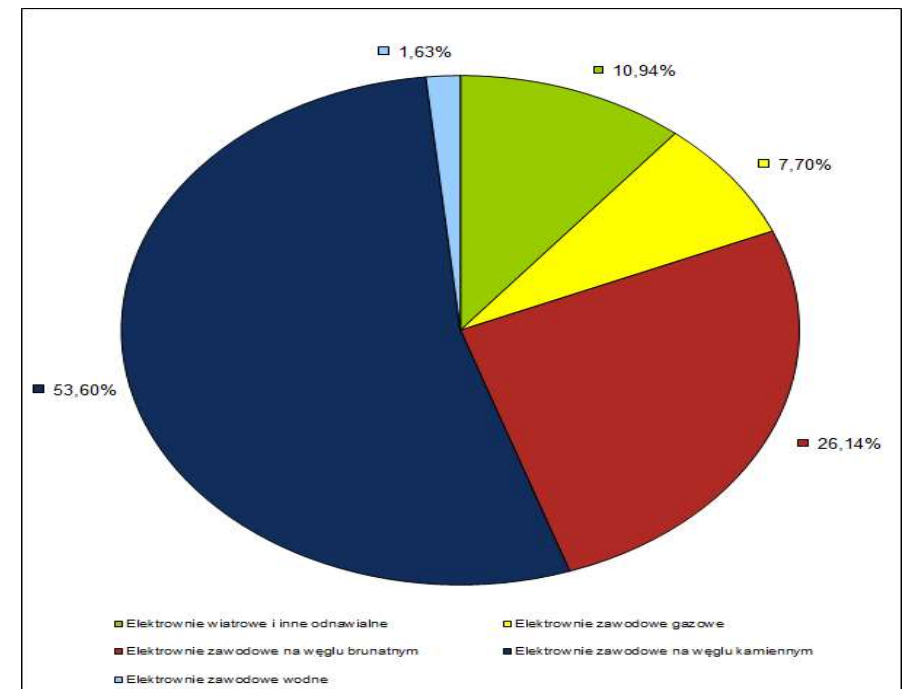
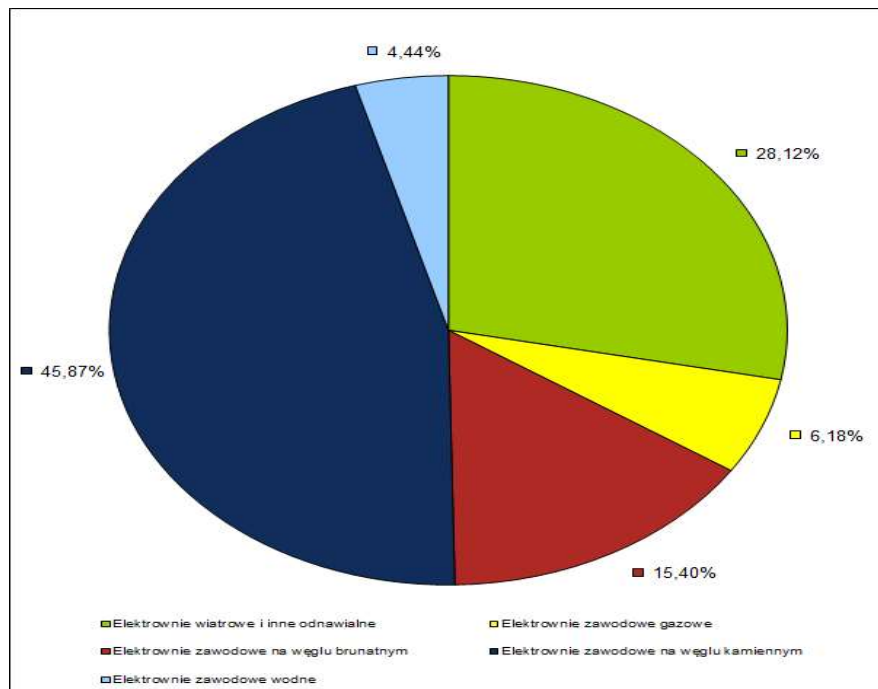
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The Geological Surveys of Europe



Percentage share of generation capacity by source types (left) and the share of individual sources in electricity production in 2021 (right)



(Raport 2021 KSE, www.pse.pl)



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The Geological Surveys of Europe



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The installed generation capacity of **Green Energy** is 2.5 times greater than its share in energy production.

Why is it like that?

January in Poland (quite often):

- Air masses come from the east,
- Full sun, beautiful weather,
- Temperature: minus 20 °C,
- **Installed power of photovoltaic panels - 10 kWh,**
- **Energy production – 0!**



Museum exhibition at the Geological Survey of Namibia



Use of kaolin for the production of toilet paper, for the customer's convenience,



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*Roczne zużycie
surowców na jedną
osobę!*

What amount of mineral resources is used by a statistical inhabitant of Poland per year?

According to Wołkowicz K. - 2019 - Mineral resources of Poland under the microscope - PGI-NRI educational exhibition

Mineral raw material	Annual consumption	Consumption fo 1 person
Crude oil	24 mln Mg	0,63 Mg
Natural gas	19 mld m ³	500 m ³
Hard coal	65 mln Mg	1,7 Mg
Brown coal	63 mln Mg	1,65 Mg
Copper	234 thousand Mg	6,2 kg
Zinc	171 thousand Mg	4,5 kg
Lead	130 thousand Mg	3,4 kg
Steel	13,5 mln Mg	355 kg
Chemical raw materials	2,4 mln Mg	63 kg
Rock salt	4,1 mln Mg	108 kg
Rock raw materials	296 mln Mg	7,8 Mg



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Challenges:

- Protection of mineral deposits,
- Geological education - making the public aware of the need to exploit mineral resources,
- Raw material security of the country
- European Green Deal,
- Circular economy,
- Reducing the scale of illegal exploitation of mineral resources, especially sand and gravel aggregate,
- Valorization of prognostic and prospective areas of the occurrence of mineral deposits.



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Muito obrigado pela atenção

Mirador de la Luna



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