



Ministerstwo
Finansów



GREEN BOND REPORT ON THE USE OF PROCEEDS UPDATE

Poland's 10-year EUR green bond maturing on March 7, 2029
Poland's 30-year EUR green bond maturing on March 8, 2049



December 2022

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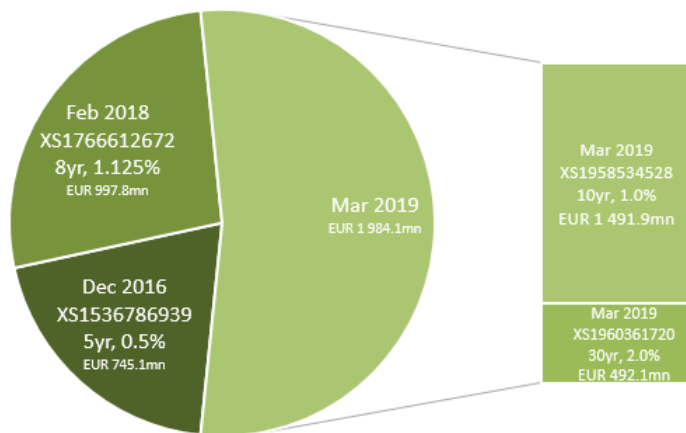
Introduction

The Republic of Poland has addressed climate change and in March 2019 came to the green bond market for the third time. Simultaneously it has made another step towards turning Polish economy greener and growing in a climate resilient and sustainable way.



The green issuance, our biggest ever, included two tranches: a 10-year bond with a nominal value of EUR 1.5bn and a 30-year bond of EUR 0.5bn. Both are listed on the Luxembourg Green Exchange.

As by the end of December 2022 all of the total green bonds proceeds were utilized, thus the report will present complete allocation of the proceeds to green projects and environmental impact they have created.



The proceeds are placed on a specifically designed green cash account until they are allocated to eligible projects. Payments reduce the total amount by corresponding values of the projects which are made in Polish zloty. Please mind that those figures were then recon-verted into euro using the EUR/ PLN exchange rate announced on the green bond issuance date for the purposes of this report.

Chart 1. Origin of proceeds from green bond issuances effected to-date.
Source: MoF's own calculation.

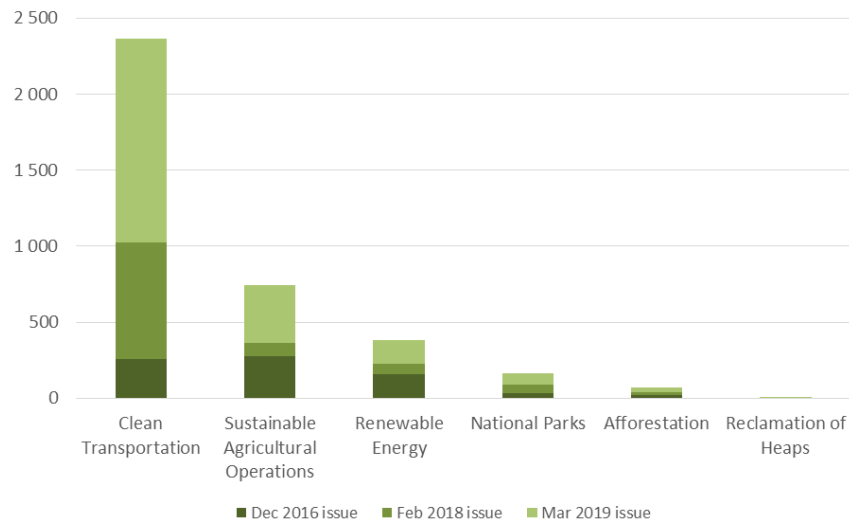


Chart 2. Cumulative sectorial distribution of proceeds from green bond issuances effected to-date in mn EUR.
Source: MoF's own calculation.

Allocation to eligible projects

The proceeds from the green bonds issuance were used to refinance existing green projects and to finance the new ones. By end of December, 2022 EUR 1,984.0bn was allocated to the eligible sectors described in the *Green Bond Framework*. All of funds has been allocated for financing green projects.

ISIN	Total Green Bond Proceeds	Total Proceeds allocated so far	Net balance
XS1958534528	1 491 930 000.00	1 491 930 000.00	0.00
XS1960361720	492 125 000.00	492 125 000.00	0.00
Total	1 984 055 000.00	1 984 055 000.00	0.00

Table 1. Allocation report in EUR.

Allocation of funds was proportionally linked to the proceeds from each bond: 75% of green expenditures of each eligible sector was financed (and refinanced) from the proceeds of the 10-year bond and the remaining 25% came from the 30-year bond.

Eligible Sector	ISIN		Total
	XS1958534528	XS1960361720	
Clean Transportation	1 005 100 111.02	331 540 281.45	1 336 640 392.47
Sustainable Agricultural Operations	289 412 751.49	95 465 102.45	384 877 853.94
Renewable Energy	115 282 158.57	38 026 738.69	153 308 897.26
National Parks	57 695 418.77	19 031 293.65	76 726 712.42
Afforestation	23 362 294.90	7 706 239.13	31 068 534.03
Reclamation of Heaps	1 077 265.34	355 344.54	1 432 609.88
Total	1 491 930 000.07	492 124 999.93	1 984 055 000.00

Table 2. Allocation report by sectors in EUR.

Source: MoF's own calculation.

The majority of funds were allocated to Clean Transportation (67%), followed by Sustainable Agricultural Operations (19%) and Renewable Energy (8%). About 87% of the proceeds financed projects launched between 2019 and 2021. The remaining 13% was spent on refinancing projects initiated in 2018.

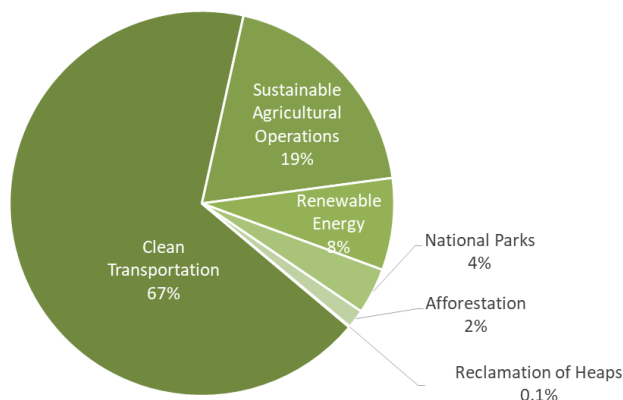


Chart 3. Distribution of proceeds by sectors.
Source: MoF's own calculation.

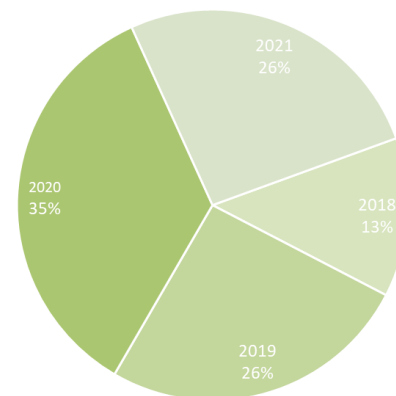


Chart 4. Distribution of proceeds by years.
Source: MoF's own calculation.

Use of proceeds in general

Clean Transportation represents the biggest eligible sector fraction — as of March 2019 issuance EUR 1 336.6mn was spent on investments in rail infrastructure and other related actions (including EUR 180.5mn on refinancing) specified in the *National Railway Programme* until 2023 (NRP) and its further updates. The main goal set in the document is to increase the role of railway. This shall pursue to limit the energy consumption and, therefore, mitigate the negative environmental impact. Adding up issuances from 2016 and 2018 financing for this sector amounted to EUR 2 345.8mn.



Sustainable Agricultural Operations represents second biggest sector fraction. Under the *Rural Development Programmer for 2014 – 2022* it amounted for EUR 384.9mn from 2019 green proceeds and EUR 761.1mn including two previous issuances. Funds for this sector has been split between *Agri-enviromental-climate programme* and *Organic farming programme**. The amounts also included expenditures on commitments undertaken under RDP for 2007-2013.

The third sector in terms of funds allocated from March 2019 issuance is Renewable energy. Renewable Energy eligible sector there was EUR 153.3mn expended to cover the excise tax exemption for electricity generated from renewable energy sources (RES), of which EUR 54.4mn was due to refinancing. Including 2016 and 2018 issuances total EUR 380.2mn was allocated in this sector**.



Subsidies for national parks amounted to EUR 76.7mn and EUR 166.2mn adding previous issuances. The goal is to promote pro-environmental attitude and raising awareness on environmental issues using a wide range of forms: educational paths, workshops, materials and sessions, didactic trips, field studies, special training for certified tourist guides etc.



The green proceeds financed projects worth EUR 31.1mn were related to afforestation (EUR 71.9mn in total). Funds from latest issuance were split between financing afforestation measures under *Rural Development Programmes** and subsidies for *Lasy Państwowe* (State Forests).

Reclamation of Heaps sector include expenditures spent on restoration of degraded lands affected by mining. The amount of EUR 1.43mn green proceeds from Match 2019 issuance and EUR 1.69mn from all issuance were disbursed to minimise adverse environmental effect of surface mining and to return the mined lands to a beneficial end-use.

More information, as well as key impact metrics and key performance indicators for particular eligible projects are presented in *Table 3. Impact report*.

* For March 2019 issuance more details can be found in *Appendix 1: Details of allocation under Rural Development Programme (RDP)*.

** For more details see *Appendix 2: Details of renewable energy*. It presents assessment of CO₂ emissions avoided as a result of expenditures made on Renewable Energy sector which is based on the assumption that the production of energy from renewable sources does not create any additional emissions of CO₂. The calculation uses a hypothetical amount of CO₂ emissions that would have been produced if a given amount of energy generated from renewable sources had been produced using the energy mix set for a given year. To calculate the CO₂ emissions avoided in 2021 the emission factor for 2020 (745 kg CO₂/MWh) was used due to the lack of appropriate indicator for 2021 (data not yet available). Emission factors are set based on data provided by entities of which environment activities cause emissions. The database is maintained by the National Centre for Emissions Management and the Institute of Environmental Protection - National Research Institute.

Impact Report

Portfolio name	Portfolio description	Eligible Sector	Amount of green bond proceeds allocated, EUR		Project years*	Share of new financing	Type of asset	Impact metric / key performance indicator (if available)
			XS1958534528	XS1960361720				
Electricity generated from renewable energy sources**	Financing the excise tax exemptions according to Article 30.1 and para 2 of the Act on Excise Duty	Renewable Energy	115 282 159	38 026 739	Q3 2018 - Q4 2021	64.5%	excise tax exemptions	Detailed information in Appendix 2
Implementation of the Environmental Protection Act	Subsidies for National Parks on i.a. conservation, restorative and educational activities	National Parks	57 695 419	19 031 294	Q4 2018 - Q4 2021	86.5%	subsidies	23 national parks on around 315 thousand ha (based on 2018 data) and modernisation of Museum and Educational Center of the Karkonosze National Park "Pałac Sobieszów".
Land restoration	Reclamation of land in coal mining areas e.g. - maintenance of Piaseczno mine workings, - cleaning and waste disposal located in "degraded forest area field F-1" in Bytom-Miechowice; - maintenance of drainage trenches surrounding landscape structure and sand separators located at their line-ends in Pszów; - design and execution of insulation layer on the ground surface against the risk of the occurrence of fires in extractive waste dumps in Pszów and survey of their thermal condition; - cleaning of drainage trench and drainage system for Carboniferous waters from the drift in Czarny Bór	Reclamation of Heaps	1 077 265	355 345	Q4 2018 - Q4 2021	84.9%	subsidies	Approximately eight projects undertaken, including e.g.: - maintenance and cleaning of drainage trenches over 1 km long and the riverbed of the Branicki watercourse of ca. 2 km; maintenance of the "piaseczno" excavation sites covering an area of ca. 43 ha; design and execution of insulation layer on part of the ground surface of the Wrozysłip of ca. 0.66 ha and survey of its thermal condition covering an area of ca. 1.45 ha.
National Railway Programme to 2023	Modernisation of railway grid including electrification of railway lines e.g.: - modernisation of railway line no E 30 (section Zabrze – Katowice – Kraków), - works on railway line no E 59 (sections: Wrocław – Poznań and Poznań Główny – Szczecin Dąbie), - works on railway line no 7 (section Warszawa – Otwock – Dęblin – Lublin), - works on railway line no 1 (section Częstochowa – Zawiercie), - works on railway line no 289 (section Legnica – Rudna Gwizdanów), - works on railway lines no: 153, 199, 681, 682, and 872 on the section Toszek Póhnoc – Rudziniac Gliwicki – Stare koźle	Clean Transportation	1 005 100 111	331 540 281	Q3 2018 - Q4 2021	86.5%	co-financing	1,729 km of railway lines, 1,213 of civil engineering facilities, 322 of railroad platforms.

Table 3. Impact report.

Portfolio name	Portfolio description	Eligible Sector	Amount of green bond proceeds allocated, EUR		Project years*	Share of new financing	Type of asset	Impact metric / key performance indicator (if available)
			XS1958534528	XS1960361720				
Subsidies for State Forests	Subsidies spent on afforestation, management of nature reserves, protection of forests, wildlife, plants	Afforestation	738 973	243 756	Q1 2018 - Q4 2021	67.3%	subsidies	In 2019: 15,331 farms and 76,032 ha; in 2020: 15,567 farms and 76,637 ha in 2021: 15,016 farms and 76,814 ha (afforestation only)****
Afforestation under Rural Development Programmes***	Investment in forestry development and improving the lifespan of trees	Afforestation	22 623 322	7 462 483	Q4 2018 - Q4 2021	97.4%	cofinancing	In 2019: 63,703 farms, area under support of 1,386,762 ha and 128,741 ha inhabited by animals; in 2020: 70,985 farms, area under support of 1,415,256 ha and 199,608 ha inhabited by animals; in 2021: 71,122 farms, area under support of 1,543,391 ha and 149,593 ha inhabited by animals****
Agri-environment-climate programme carried out under Rural Development Programmes***	Contribution to sustainable development of rural areas, promotion of sustainable use of soil, controlled use of fertilizers, protection of endangered bird species and natural habitats, preservation of endangered genetic plants and animal resources, protection of ecosystem diversity	Sustainable Agricultural Operations	209 539 448	69 118 257	Q4 2018 - Q4 2021	94.7%	cofinancing	In 2019: 16,579 farms and 576,211 ha; in 2020: 17,169 farms and 636,047 ha; in 2021: 16,158 farms and 685,499 ha****
Organic farming programme carried out under Rural Development Programmes***	Environmentally-friendly farming including prohibiting the use of chemically synthesized plant protection products and fertilizers	Sustainable Agricultural Operations	79 873 303	26 346 846	Q4 2018 - Q4 2021	99.8%	cofinancing	In 2019: 16,579 farms and 576,211 ha; in 2020: 17,169 farms and 636,047 ha; in 2021: 16,158 farms and 685,499 ha****

Key performance indicators for: Clean Transportation sector (km of railway lines, civil engineering facilities, railroad platforms), Sustainable Agriculture Operations sector (number of farms, area in ha, number of animals), Afforestation sector: number of farms, area in ha) do not show the impact resulting from specific expenditures financed by the green proceeds but demonstrate the environmental impact of the total expenditures at the programme level, i.e. they result from green and other sources of financing.

Table 3 (continued). Impact report.

Source: MoF's own calculation based on data provided by other governmental institutions.

Appendix 1: Details of allocation under Rural Development Programme (RDP)

	2019			2020			2021		
	Amount (EUR mn)	no of farms	ha**	Amount (EUR mn)	no of farms	ha**	Amount (EUR mn)	no of farms	ha**
I. Agri-environment-climate programme*	91.77	63 703	1 515 503	85.59	70 985	1 614 864	86.53	71 122.00	1 692 984
1. Agri-environment-climate programme under RDP 2014-2020	89.27	60 747	960 148	85.54	70 957	1 122 501	86.48	71 106	1 215 605
Sustainable farming	15.29	7 235	337 108	13.75	7 891	368 697	11.48	6 378	386 885
Protection of soil and water	9.95	11 182	122 246	10.01	13 655	160 122	13.46	16 035	194 004
Protection of endangered bird species and natural habitats in Natura 2000 areas	30.06	24 067	274 311	28.16	27 971	326 502	28.53	26 948	367 595
Protection of endangered natural bird species and habitats outside Natura 2000 areas	27.09	21 744	218 021	26.92	26 532	271 328	25.87	27 049	305 202
Preservation of endangered genetic plant resources in agriculture	0.95	3 090	11 267	1.09	3 866	13 889	1.18	4 254	16 620
Preservation of endangered genetic animal resources in agriculture	5.83	2 829	81 069	5.49	3 243	94 826	5.87	3 115	101 917
Others	0.11	731	524	0.11	835	662	0.09	703	677
2. Agri-environment-climate programme under RDP 2007-2013	2.50	4 685	962 142	0.05	47	961 648	0.05	21	961 603
Sustainable farming	0.47	1 148	551 693	0.01	25	550 923	0.01	8	550 922
Protection of endangered bird species and natural habitats outside Natura 2000 areas	0.30	832	113 663	0.03	14	113 741	0.03	8	113 733
Protection of endangered bird species and natural habitats in Natura 2000 areas	1.26	2 018	125 814	0.01	10	125 966	0.01	7	125 911
Protection of endangered genetic resources of animals in agriculture	0.22	187	47 672	0.00	0	104 781	0.00	0	47 676
Protection of soil and water	0.21	997	244 551	0.00	6	244 599	0.00	1	244 585
Others	0.04	195	85 643	0.00	8	85 747	0.00	0	0

Table 4. Details of the Agri-environment-climate programme dispersions.

	2019			2020			2021		
	Amount (EUR mn)	no of farms	ha**	Amount (EUR mn)	no of farms	ha**	Amount (EUR mn)	no of farms	ha**
II. Organic farming*	25.27	16 579	576 211	45.83	17 169	636 047	34.92	16 158	685 499
1. Organic farming programme under RDP 2014-2020	23.22	13 936	351 052	45.77	17 158	428 816	34.89	16 152	481 472
Agricultural crops during the conversion period and after the conversion period	10.65	13 936	351 052	26.82	17 158	428 816	21.31	16 152	481 472
Vegetable cultivation in the conversion period and after the conversion period	2.18			3.14			2.36		
Herbal crops in the conversion period and after the conversion period	3.09			2.70			1.59		
Orchard cultivation during the conversion period and after the conversion period	1.93			3.66			2.38		
Fodder cultivation on arable land during the conversion period and after the conversion period	4.22			7.28			5.53		
Permanent grasslands in the conversion period and after the conversion period	1.15			2.18			1.72		
2. Organic farming programme under RDP 2007-2013	2.06			2 712			344 287		
Agricultural crops during the conversion period and after the conversion period	1.80	2 712	344 287	0.05	17	344 609	0.02	9	344 719
Vegetable cultivation in the conversion period and after the conversion period	0.09			0.00			0.00		
Herbal crops in the conversion period and after the conversion period	0.01			0.00			0.00		
Orchard cultivation during the conversion period and after the conversion period	0.14			0.01			0.01		
Permanent grasslands in the conversion period and after the conversion period	0.02			0.00			0.00		
III. Afforestation under RDP	11.72			15 331			76 032		

* Total number of farms and ha are not the sum of partial amounts because beneficiaries who received funding in several areas mentioned above are included in total numbers only once.

** Numbers of ha (number of animals) refer to the period from the RDP 2014-2020 inception until the end of 2019 and 2020, respectively.

*** Afforestation only.

Table 4 (continued). Details of the Organic farming programme and Afforestation dispersions.

Source: MoF's own calculation.

Appendix 2: Details of renewable energy

Period	Amount of excise duty refund, EUR mn	Electricity with return, MWh*	Estimated amount of CO ₂ avoided, kt
Q3 2018	30.6	6 586 349	5 216
Q4 2018	23.7	5 104 713	4 043
Q1 2019	26.4	22 674 149	17 187
Q2 2019	4.7	4 003 882	3 035
Q3 2019	3.4	2 890 187	2 191
Q4 2019	8.0	6 842 083	5 186
Q1 2020	5.7	4 868 536	3 627
Q2 2020	7.6	6 569 555	4 894
Q3 2020	5.4	4 657 340	3 470
Q4 2020	8.0	6 898 747	5 140
Q1 2021	8.5	7 341 794	5 470
Q2 2021	6.3	5 432 088	4 047
Q3 2021	3.6	3 088 149	2 301
Q4 2021	11.5	9 866 437	7 350
Total	153.3	96 824 008.6	73 156.7

* Estimated value of energy from renewable sources, for which excise duty was obtained in a calendar year; MoF's estimates, excise tax on electricity take-off in 2018 amounted to 20.00 PLN/MWh and since January 1, 2019 reduced to 5.00 PLN/MWh.

Table 5. Excise duty refund by quarters.

Source: MoF.

Production of electricity from renewable energy sources in GWh*					
	Q3-Q4 2018	2019	2020	2021	Total
Water	841	2 454	2 698	2 830	8 823
Wind	5 848	13 904	14 174	14 234	48 160
Other RES	139	442	2 198	4 749	7 528
Total	6 828	16 800	19 070	21 813	64 511

* Data are calculated on the basis of measurements collected by the transmission system operator during the current traffic of the National Electricity System. Therefore the data sometimes can differ from the final data provided by energy companies for statistical purposes.

<https://www.pse.pl/dane-systemowe/funkcjonowanie-kse/raporty-miesieczne-z-funkcjonowania-rb/raporty-miesieczne>

Table 6. Estimated amount of electricity produced in RES installations in Poland.

Source: Polish Power System

Power installed in MW, end of period*				
	2018	2019	2020	2021
Water	982	973	976	990
Wind	5 864	5 917	6 347	6 891
Biofuel	1 363	1 493	1 513	1 419
Biogas	238	245	256	257
Solar energy	147	478	887	1 693
Total	8 593	9 106	9 979	11 251

* <https://www.ure.gov.pl/pl/oze/potencjal-krajowy-oze>

Table 7. Power capacity in RES installations in Poland.

Source: Energy Regulatory Office.

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