

The Grand Duchy of Luxembourg

Type of Engagement: Annual Review

Date: 1 September 2023

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Introduction

In September 2020, The Grand Duchy of Luxembourg ("Luxembourg") issued a sustainability bond under the Grand Duchy of Luxembourg Sustainability Bond Framework¹ (the "Framework") aimed at financing green and social expenditures to achieve, among other things, the ambitions set out in Luxembourg's "National Plan for Sustainable Development".² Sustainalytics provided a Second Party Opinion³ on the Framework in August 2020. In August 2023, Luxembourg engaged Sustainalytics to review the projects funded in 2022 through the issued sustainability bond and provide an assessment as to whether the projects met the Use of Proceeds criteria and the Reporting commitments outlined in the Framework.

This is Sustainalytics' third annual review for Luxembourg. As per the impact report 2018-2020, Luxembourg financed and refinanced expenditures that incurred in the budget years 2018 to 2020 with total disbursements of EUR 786.3 million.^{4,5} In 2021, total disbursements were EUR 347.7 million.^{6,7} In 2022, total disbursements were EUR 366.4. million within the following seven Framework categories: i) Low Carbon Transport, ii) Water and Wastewater Management, iii) Protection of the Environment, iv) Access to Essential Services - Education, v) Access to Essential Services - Healthcare, vi) Access to Essential Services - Social Inclusion, and vii) Affordable Housing. Luxembourg has allocated all outstanding proceeds.

Evaluation Criteria

Sustainalytics evaluated the projects and assets funded in 2022 based on whether the projects and programmes:

1. Met the Use of Proceeds and Eligibility Criteria outlined in the Grand Duchy of Luxembourg Sustainability Bond Framework; and
2. Reported on at least one of the Key Performance Indicators (KPIs) for each Use of Proceeds criteria outlined in the Grand Duchy of Luxembourg Sustainability Bond Framework.

Table 1 lists the Use of Proceeds, Eligibility Criteria, while Table 2 lists the associated KPIs.

Table 1: Use of Proceeds, Eligibility Criteria and Associated KPIs

Use of Proceeds	Eligibility Criteria
Low Carbon Transport	• Low carbon transportation including: - Public transport - Infrastructure for low carbon transport

¹ The Grand Duchy of Luxembourg Sustainability Bond Framework is available on the website of the Luxembourg State Treasury at: <https://te.public.lu/content/dam/tresorerie/fr/sustainable/20200831-Luxembourg-Sustainability-Bond-Framework.pdf>

² "Luxembourg 2030: 3rd National Plan for Sustainable Development", at: <https://environnement.public.lu/dam-assets/documents/developpement-durable/PNDD.pdf>

³ Grand Duchy of Luxembourg Sustainability Bond Framework Second-Party Opinion, at: <https://www.sustainalytics.com/corporate-solutions/sustainable-finance-and-lending/published-projects/project/the-grand-duchy-of-luxembourg/grand-duchy-of-luxembourg-sustainability-bond-framework-second-party-opinion/grand-duchy-of-luxembourg-sustainability-bond-framework-second-party-opinion-pdf>

⁴ Luxembourg has informed Sustainalytics that there has been a retroactive change in allocation for this figure. Hence, this is not consistent with the figure reported in the previous Impact Report and Annual Review.

⁵ The Grand Duchy of Luxembourg Sustainability Bond Impact Report 2021, at: <https://te.public.lu/content/dam/tresorerie/fr/sustainable/2021-Luxembourg-Sustainability-Bond-Report-2018-2020.pdf>

⁶ The Grand Duchy of Luxembourg Sustainability Bond Impact Report 2021, at: <https://tresorerie.public.lu/dam-assets/fr/sustainable/luxembourg-sustainability-bond-report-2021.pdf>

⁷ Luxembourg has informed Sustainalytics that there has been a retroactive change in allocation for this figure. Hence, this is not consistent with the figure reported in the previous Impact Report and Annual Review.

Water and wastewater Management	Support the development of water and wastewater management systems allowing to significantly improve energy efficiency and/or water quality
Protection of the Environment	- Waste management - Protection and restoration of healthy ecosystems and their services
Access to Essential Services - Education	- Providing access to essential educational infrastructure and services for all by: - Extending educational capacities - Improving the quality of the existing educational infrastructure and equipment
Access to Essential Services- Healthcare	- Provide access to essential healthcare infrastructure and services for all by: - Extending healthcare capacities - Improving the quality of the existing healthcare facilities
Access to Essential Services - Social Inclusion	- Provide access to essential services for population groups at risk of social exclusion by: - Providing access to essential infrastructure and services to vulnerable population - Providing financial assistance to vulnerable population
Affordable Housing	- Provide access to affordable housing to vulnerable population by: - Extending the social and affordable housing supply - Improving the quality of the existing social and affordable housing facilities - Providing financial assistance to facilitate access to housing and ownership

Table 2: Key Performance Indicators

Use of Proceeds	Key Performance Indicators
Low Carbon Transport	- Annual number of low carbon vehicles deployed by type of transport (e.g number of trains/trams) - Annual number of users served - Other relevant indicators depending on the considered projects
Water and Waste Water Management	- Annual volume of water collected and disposed or treated (in m³) - Number of users served - Other relevant indicators depending on the considered projects
Protection of the Environment	- Annual volume of waste collected and disposed or treated (in tonnes) - Surface of protected or restored areas (in hectares) - Other relevant indicators depending on the considered projects
Access to Essential Services - Education	- Number of education infrastructures benefiting from the eligible expenditures, including a breakdown by type of infrastructures (schools, universities...) - Capacity/additional capacity (in number of students)
Access to Essential Services - Healthcare	- Number of healthcare infrastructures benefiting from the eligible expenditures, including a breakdown by location - Capacity/additional capacity (in number of beds and/or patients)
Access to Essential Services- Social Inclusion	- Number of social inclusion infrastructures benefiting from the eligible expenditures, including a breakdown by type of infrastructures - Capacity/additional capacity (in number of beneficiaries)
Affordable Housing	- Number of dwellings - When available, additional information may be provided regarding the energy performance of eligible buildings

Issuer's Responsibility

Luxembourg is responsible for providing accurate information and documentation relating to the projects funded, including description of projects and amounts allocated.

Independence and Quality Control

Sustainalytics, a leading provider of ESG and corporate governance research and ratings to investors, conducted the verification of Luxembourg's Sustainability Bond Use of Proceeds. The work undertaken as part of this engagement included the collection of documentation from the Luxembourg Sustainability Bond Committee and the review of documentation to assess conformance with the Grand Duchy of Luxembourg Sustainability Bond Framework.

Sustainalytics has relied on information and facts presented by Luxembourg with respect to the Nominated Projects. Sustainalytics is not responsible nor shall it be held liable if any of the opinions, findings or conclusions it has set forth herein are not correct due to incorrect or incomplete data provided by Luxembourg.

Sustainalytics made all efforts to ensure the highest quality and rigor during its assessment process and enlisted its Sustainability Bonds Review Committee to provide oversight over the assessment of the review.

Conclusion

Based on the limited assurance procedures conducted,⁸ nothing has come to Sustainalytics' attention that causes us to believe that, in all material respects, the reviewed projects do not meet the use of proceeds criteria outlined in the Grand Duchy of Luxembourg Sustainability Bond Framework. Luxembourg has disclosed to Sustainalytics that the proceeds from the Grand Duchy of Luxembourg Sustainability Bond Framework bond were fully allocated as at December 31st, 2022.

Detailed Findings

Table 2: Detailed Findings

Eligibility Criteria	Procedure Performed	Factual Findings	Error or Exceptions Identified
Use of Proceeds Criteria	Verification of the projects funded by the sustainability bond in 2022 to determine if projects aligned with the Use of Proceeds criteria outlined in the Grand Duchy of Luxembourg Sustainability Bond Framework and above in Table 1.	All projects reviewed complied with the use of proceeds criteria.	None
Reporting Criteria	Verification of the projects funded by the sustainability bond in 2022 to determine if impact of projects was reported in line with the KPIs outlined in the Grand Duchy of Luxembourg Sustainability Bond Framework and above in Table 1. For a list of KPIs reported please refer to Appendix 2.	All projects reviewed complied with the reporting criteria, except for projects financed under the Protection of the Environment category, which will be reported when available.	KPIs for expenditures under Protection of the Environment are not yet available. For more information see Appendix 2.

⁸ Sustainalytics limited assurance process includes reviewing the documentation relating to the details of the funded projects, including description of projects, estimated and realized costs of projects, and project impact, as provided by the Issuer, which is responsible for providing accurate information. Sustainalytics has not conducted on-site visits to projects.

Appendices

In September 2020, Luxembourg raised EUR 1.5 billion through its sustainability bond. It allocated EUR 786.3 million between 2018 and 2020, EUR 347.7 million in 2021, and EUR 366.4 million in 2022 across three green and four social categories. See below a summary of the reported allocated amounts for each category.

Appendix 1: Allocation Reporting

Use of Proceeds Category	Sub-category	Allocated amount (EUR)				
		2018	2019	2020	2021	2022
Low Carbon Transport	Public transport	36,262,909	35,502,137	63,104,052	42,423,149	37,651,856
	Infrastructure for low carbon transport	82,434,946	91,828,319	78,313,601 ⁹	102,216,780 ¹⁰	102,202,065
Water and Wastewater Management	Supporting the development of water and wastewater management systems allowing to significantly improve water quality	21,617,003	30,581,130	12,373,662	20,169,995	21,167,983
Protection of the Environment	Protection and restoration of healthy ecosystems and their services					6,172,242
Access to Essential Services - Education	Providing access to essential educational infrastructure and services for all	19,487,752	31,579,543	47,557,026	61,487,367	54,734,071
Access to Essential Services - Healthcare	Providing access to essential healthcare infrastructure and services for all	25,454,576	27,340,591	45,454,415	35,564,187	15,666,942
Access to Essential Services- Social Inclusion	Providing access to essential services for population groups at risk of social exclusion	18,898,937 ¹¹	25,639,600 ¹²	25,571,322 ¹³	32,979,142 ¹⁴	50,381,553
Affordable Housing	Providing access to affordable housing to vulnerable population	15,167,975	26,704,393	25,387,381	52,831,175	78,387,508
Allocations by budget year		219,324,098	269,175,713	297,761,459	347,671,795	366,364,220
Total allocated		1,500,297,285				
Total proceeds raised		1,500,297,285				
Unallocated proceeds		0				

⁹ Luxembourg has informed Sustainalytics that there has been a retroactive change in allocation for this figure. Hence, this is not consistent with the figure reported in the previous Impact Report and Annual Review.

¹⁰ Ibid.

¹¹ Ibid.

¹² Ibid.

¹³ Ibid.

¹⁴ Ibid.

Appendix 2: Impact Reporting by Eligibility Criteria

Use of Proceeds Category ¹⁵	Indicators	Impact Reported				
		2018	2019	2020	2021	2022
Low Carbon Transport	Number of low-carbon vehicles deployed by type of transport (trams/year)	8	9	11	17	19
	Number of users served on new tram and train lines (users/year)	5,752,704	7,230,837	5,180,667	15,395,304	21,426,864
	Length of new tram lines / new rail lines / new cycle paths built (km) ¹⁶	15.8	15.8	18.56	18.56	23.45
	Passenger-kilometers (pkm) on additional low-carbon transport infrastructure (pkm/year)	25,680,312	38,567,788	22,639,071	88,028,468	146,233,738
	Number of freight containers and semi-trailers - maximum annual capacity/year (ITU) ¹⁷	600,000	600,000	600,000	600,000	600,000
	Number of freight containers and semi-trailers/year (ITU)	127,448	133,863	135,207	163,471	160,498
	Number of tonnes transferred from road to rail transport (per year)	3,186,200	3,346,575	3,380,175	4,007,180	2,975,195
Water and Wastewater Management	Volume of water treated (m ³ /year)	-	-	15,584,926	15,927,376	31,069,538
	Total number of users served (population equivalent/year)	15,346	16,551	169,951	170,947	176,583
	Sewage sludge anaerobic digestion and use of biogas for energy generation (tonnes of sewage sludge/year)	-	-	1,220 ¹⁸	2,115	1187
Access to Essential Services - Education	Number of institutions benefiting from these investments ¹⁹	9	9	9	10	10
Access to Essential Services - Healthcare	Number of institutions benefiting from these investments ²⁰	20	20	20	20	20
Access to Essential Services- Social Inclusion	Number of beneficiaries ²¹ /year	237	1,012	2,786	1,823 ²²	2789
Affordable Housing	Finished Housing units	-	-	-	274	162

¹⁵ The Grand Duchy of Luxembourg communicated to Sustainalytics that KPIs for the Protection of the Environment category are not yet available and will be disclosed according to the reporting criteria contained in the Framework.

¹⁶ These values are absolute values.

¹⁷ The OECD defines Intermodal Transport Unit as "international transportation method that involves several different modes of transportation: ocean freight, air freight, rail, trucking, etc.", available at: <https://stats.oecd.org/glossary/detail.asp?ID=4303>

¹⁸ Luxembourg has informed Sustainalytics that there has been a retroactive change for this figure. Hence, this not consistent with the figure reported in the previous Impact Report and Annual Review.

¹⁹ These values are absolute values. All institutions benefitting were schools and childcare facilities.

²⁰ These values are absolute values. Projects are in the following locations: Luxembourg (7 projects), Putscheid (1 project), Steinfort (1 project), Esch-sur-Alzette (2 projects), Ettelbruck (1 project). Two other projects financed all four hospital centres of the country.

²¹ Beneficiaries are defined as people having applied for or benefiting from international protection.

²² Institutions benefiting include the following: Reception centres for people having applied for or benefiting from international protection (487 beneficiaries); reception centre for homeless people and multifunctional emergency structure for people in need (1,246 beneficiaries); and construction, renovation and transformation of different properties to create a new residential home and day centre for persons with disabilities (90 beneficiaries).

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