

ASSESSMENT

9 January 2025



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Ville de Paris

Second Party Opinion – Sustainability Bond Assigned SQS2 Sustainability Quality Score

Summary

We have assigned an SQS2 sustainability quality score (very good) to the City of Paris' sustainability bond issued in September 2022. The issuer has financed projects across three green categories (clean transportation, energy efficiency and climate change adaptation) and two eligible social categories (access to essential services, and social and affordable housing). In accordance with the main characteristics described within the City of Paris' formalized framework dated October 2017 and the exhaustive list of projects detailed in the annual report of the September 2022 bond, the issuance is aligned with the four core components of the International Capital Market Association's (ICMA) Green Bond Principles (GBP) 2021 (including the June 2022 Appendix 1), Social Bond Principles (SBP) and Sustainability Bond Guidelines (SBG) 2023. The bond also demonstrates a high contribution to sustainability.

Sustainability quality score

SQS2

Alignment with principles
USE OF PROCEEDS

Overall alignment

FACTORS	ALIGNMENT
Use of proceeds	
Evaluation and selection	
Management of proceeds	
Reporting	

Contribution to sustainability

Final contribution to sustainability

Preliminary contribution to sustainability
Relevance and magnitude

Additional considerations: **No adjustment**

POINT-IN-TIME ASSESSMENT

Scope

We have provided a second party opinion (SPO) on the sustainability credentials of the City of Paris' sustainability bond issued in September 2022, including its alignment with the ICMA's GBP 2021 (including the June 2022 Appendix 1), SBP and SBG 2023. Proceeds from the bond financed projects in three green categories (clean transportation, energy efficiency and climate change adaptation) and two social categories (access to essential services and social and affordable housing), as outlined in Appendix 3 of this report.

Our assessment is based on the framework last updated in 2017, as well as the list of eligible green and social expenditures financed by the 2022 bond issuance, and our opinion reflects our point-in-time assessment¹ of the details contained in this version of the report, as well as other public and non-public information provided by the company.

We produced this SPO based on our [Assessment Framework: Second Party Opinions on Sustainable Debt](#), published in November 2024.

Issuer profile

The City of Paris is the administrative and economic capital of France. The city had an estimated population of 2,142,366 and a population density of 20,403 inhabitants per square kilometer as of January 2021. It covers a total area of about 105 square kilometers, divided into 20 municipal boroughs (arrondissements). In June 2020, the first, second, third and fourth boroughs were grouped into a single borough — each of the 17 has its own directly elected council and administrative offices.

Regional and local governments (RLGs) in developed economies are very diverse in terms of geography and ecosystems, responsibilities assumed, tax base concentration, and policies and regulations designed to reduce carbon emissions or mitigate air pollution and other environmental risk factors. RLGs are generally resilient to climate shocks and negative climate trends. However, they are exposed to demographic risks as their populations age. Such risks can slow economic growth and increase demand for services, resulting in less dynamic fiscal revenue, increased social expenditure and unfunded pension liabilities. Poor employment growth prospects and labor participation may also strain advanced economies' RLGs' finances, particularly where the working-age population is contracting, along with high levels of income inequality and pressure on housing affordability (especially in big cities).

Strengths

- » The issuer has provided a detailed list of the projects financed with the bond proceeds, including the respective allocation by category and project.
- » The environmental and social benefits are relevant and measurable.
- » The bond proceeds are allocated within 12 months without temporary investments.

Challenges

- » There is no external verification of the environmental and social indicators.

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Alignment with principles

The City of Paris' sustainability bond issued in September 2022 is aligned with the four core components of the ICMA's GBP 2021 (with June 2022 Appendix 1) and SBP and SBG 2023. For a summary alignment with principles scorecard, please see Appendix 1.

- | | |
|---|---|
| <input checked="" type="checkbox"/> Green Bond Principles (GBP) | <input type="checkbox"/> Green Loan Principles (GLP) |
| <input checked="" type="checkbox"/> Social Bond Principles (SBP) | <input type="checkbox"/> Social Loan Principles (SLP) |
| <input type="checkbox"/> Sustainability-Linked Bond Principles (SLBP) | <input type="checkbox"/> Sustainability Linked Loan Principles (SLLP) |

Use of proceeds



Clarity of the eligible categories – BEST PRACTICES

The City of Paris has shared the list of projects financed by the 2022 bond issuance, including their locations and detailed descriptions, as well as the target populations for social projects. All the projects are located in Paris. The bond proceeds were exclusively used to finance capital spending in accordance with the applicable budget regulation.

Clarity of the environmental or social objectives – BEST PRACTICES

The issuer has clearly outlined the environmental and social objectives associated with all environmental and social projects, and they are coherent with international standards. These objectives include climate change mitigation, climate change adaptation and access to essential services. All financed projects are relevant to the respective environmental and social objectives.

Clarity of expected benefits – BEST PRACTICES

The Issuer has identified clear and measurable expected environmental and social benefits for all five eligible categories in its annual report. Relevant indicators include, for example, avoided carbon emissions (in tonnes of CO₂ per year), the number of trees planted and hectares of green spaces created, and the number of social housing units created. For environmental projects, the issuer also reports social co-benefits, and for social projects, the issuer also reports environmental co-benefits. This provides a holistic view of the sustainability benefits of the financed projects. The issuer has reported that there has been no refinancing and therefore, the disclosure of the look-back period is not relevant in this case.

Process for project evaluation and selection

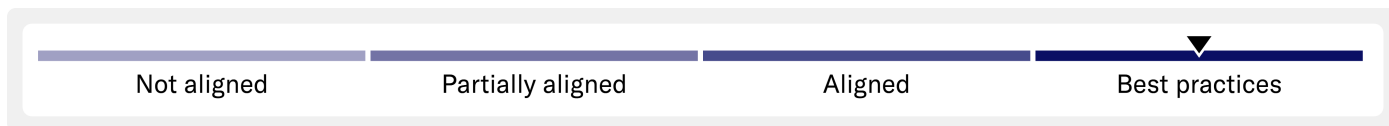


Transparency and clarity of the process for defining and monitoring eligible projects – ALIGNED

The process for evaluating and selecting the projects financed is structured and clearly defined in both the framework and reporting. A dedicated procurement department ensures the integration of environmental, social and governance (ESG) criteria in contracts, which applies to most of the projects. The Directorate of Finance and Purchases collects data on the eligible projects and carries out an initial analysis of asset eligibility, in concert with operational teams managing the projects and elected council members. The sustainability bond committee — comprised of members with relevant expertise — selects, reviews and approves the eligible projects on an annual basis. The compliance of projects with the eligibility criteria is only monitored until the full allocation of the proceeds and not throughout the lifetime of the bond.

The City of Paris is transparent regarding its management of environmental and social risks in its reporting. The sustainable governance indicators in their framework clearly show their institutional commitment. In addition, they provide comprehensive descriptions at the project level, explaining the steps taken to address specific ESG risks. Where possible, these reports include quantified indicators.

Management of proceeds

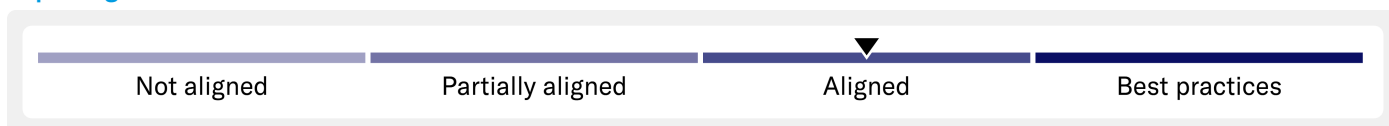


Allocation and tracking of proceeds – BEST PRACTICES

The issuer has defined a clear process for the management and allocation of bond proceeds in its publicly available framework and reporting. Net proceeds from the bond are placed in the city's general treasury account, but separately tracked to ensure their use only for eligible projects. The City of Paris confirmed it has taken specific measures as part of the annual financial audit process to monitor the amounts invested in the selected eligible projects. The allocation period for the bond proceeds was shorter than 12 months, constituting a best practice.

Unallocated proceeds are kept in cash in the standard liquidity fund of the City of Paris' treasury, following the French regulatory framework for local authorities. There are no temporary placements for unallocated proceeds. In the event of project divestment, the issuer has specified that it will reallocate the proceeds to projects that are compliant with the bond framework.

Reporting

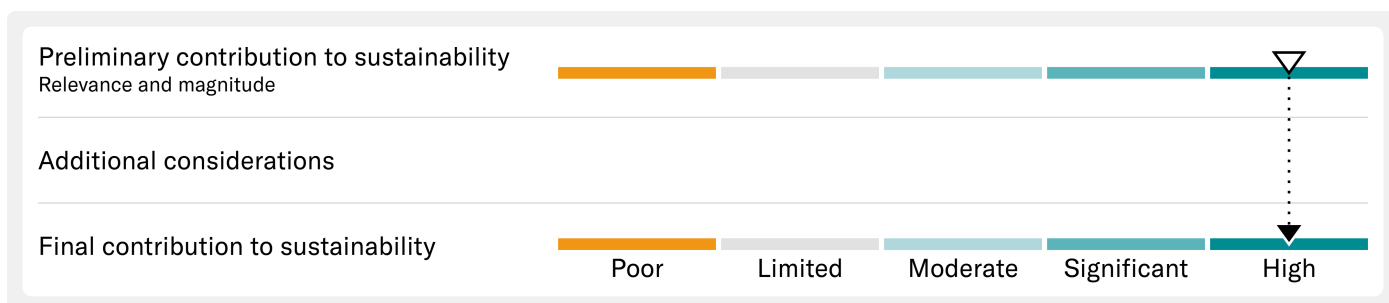


Reporting transparency – ALIGNED

The City of Paris has committed to reporting on an annual basis, at least until the full allocation and in case of significant developments. The reporting is disclosed publicly and includes details on financed projects, proceeds allocation, progress on the projects financed, environmental and social results and impact indicators, and ESG risk management measures and indicators. Reporting on the allocation of proceeds is exhaustive. The environmental and social indicators are clear and relevant, and cover all the expected environmental and social benefits, as well as co-benefits (for example, social co-benefits for projects with an environmental objective). In addition, the issuer has included calculation methodologies and assumptions in its reporting, in line with previous commitments. Despite the absence of annual independent verification of the allocation of proceeds, nor of the environmental and social indicators, we note that the City of Paris provides highly detailed and comprehensive reporting every year.

Contribution to sustainability

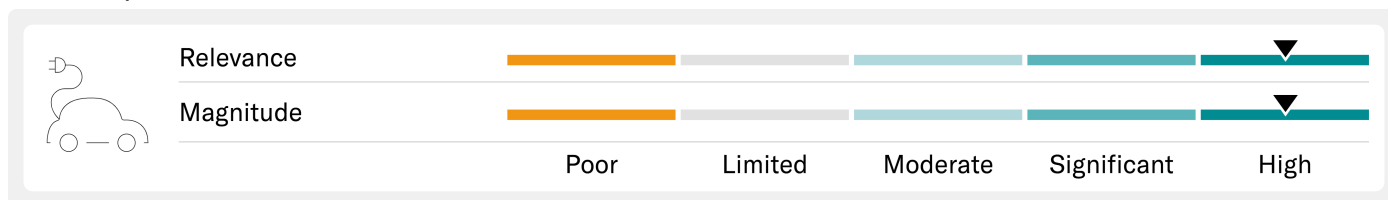
The bond demonstrates a high overall contribution to sustainability. This reflects a preliminary contribution to sustainability score of high, based on the relevance and magnitude of the eligible project categories, and we have not made an adjustment to the preliminary score based on additional contribution to sustainability considerations.



Preliminary contribution to sustainability

The preliminary contribution to sustainability is high, based on the relevance and magnitude of the eligible project categories. Based on information provided by the issuer, we have used the actual proceeds allocation information to inform the weightings of categories, with clean transportation, and social and affordable housing accounting for more than 80% of the total. A detailed assessment by eligible category has been provided below.

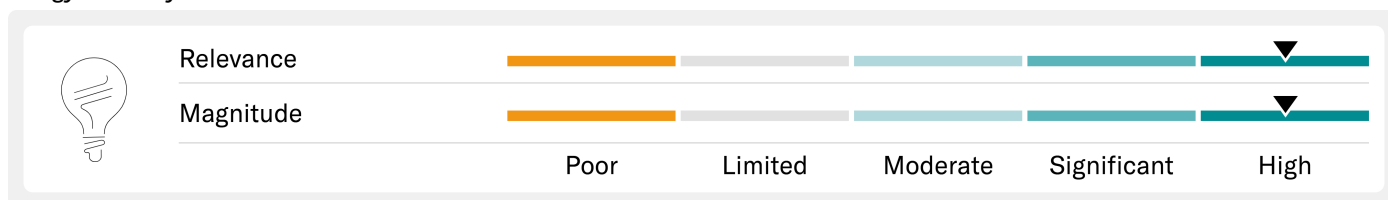
Clean Transportation



The financing of low-carbon assets, such as cycle lanes, public passenger transport infrastructure and the redesign of the Porte Maillot, to include train stations, cycle lanes and bus lanes, is highly relevant to address the city's primary GHG emissions and to promote clean transportation. Expanding the city's access to low-carbon transportation is critical for the reduction of the city's dependence on the use of individual cars and the reduction of the sector's greenhouse gas (GHG) emissions. According to the Ministry of Ecological Transition, the sector accounts for 31% of the country's GHG emissions in France. Moreover, although Paris is one of the top 10 cities in the world in terms of urban mobility readiness, challenges remain in terms of system efficiency and social impact, where the city lags the European average.

The eligible projects to expand cycle lanes and extend tramway, subway and bus lines highly contribute to GHG emission reduction. Assets are dedicated to or support public zero tailpipe emission vehicles, and hence follow the strictest market standards. The largest part of the allocation is dedicated to the extension of the tramway, considered as a best available technology for public transportation. The extension of public transportation not only favors the extension of transportation within Paris but also helps further connect the city to suburbs. However, the Porte Maillot project includes three lanes dedicated to individual passenger cars.

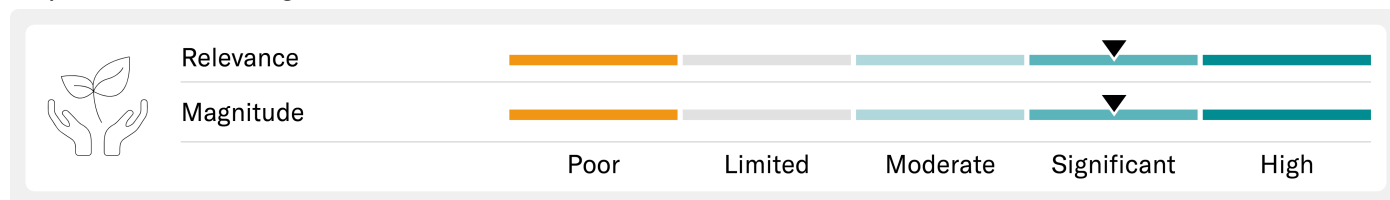
Energy Efficiency



Improving the energy efficiency of buildings of the city's social housing stock is a critical step toward decreasing the overall energy use in the building sector and it also represents a highly relevant topic in the context of the French regulation evolution regarding EPC certification. In 2021, the real estate sector is estimated to account for 44% of France's energy consumption (mainly because of the heating needs of the residential sector), and roughly 25%-30% of the country's total GHG emissions. Moreover, to follow the National Low-Carbon Strategy, 370,000 buildings must be completely renovated each year between 2015 and 2030, with an additional 700,000 buildings per year between 2030 and 2050. This compares with less than 300,000 buildings each year currently. The average energy consumption of residential buildings in Paris is 242 kWh/m² per year. In 2022, more than 50% of the Parisian agglomeration buildings had an energy performance certificate of E, F or G, with only 19% attaining a C level or above.

The projects identified in the category highly contribute to the reduction of energy consumption and GHG emissions of the Parisian building sector. The renovation of social housing buildings led to a 55% of energy consumption reduction in 2022, and goes largely beyond the EU taxonomy requirements of a 30% reduction in primary energy demand. Moreover, the renovation enable the financed buildings to hold a EPC-C level, reaching an average energy consumption of 149 kWh/m²/year. It is in line with the 1.5°C scenario established by the Carbon Risk Real Estate Monitor (CREEM) for the year 2022, which represents the highest standard currently available.

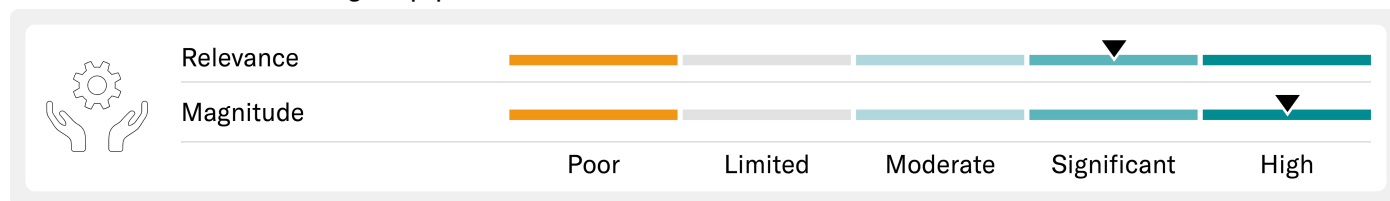
Adaptation to climate change



The category aims at financing the expansion of green areas and the increase urban tree coverage in the city, representing a significant challenge for the protection and restoration of biodiversity, and to mitigate the risk associated with the urban heat island effect. With its very dense urban area, the City of Paris influences its meteorological environment by generating an urban microclimate known as an urban heat island. During the August 2003 heat wave, a difference of 4°C-8°C was observed between the center of Paris and the surrounding less urbanized areas, highlighting the relevance of projects that aim to reduce the effects of extreme heat. In terms of green areas, Paris is the city of France with the least green areas per inhabitant, with a canopy index below the international target of 40%. Compared with EEA-38 cities, Paris ranks 33rd in terms of total green infrastructure.

Investments in the expansion of green areas in the City of Paris significantly contribute to address climate change adaptation at a local level. Expanding green spaces and enhancing urban forestry contribute to mitigating the urban heat island effect and facilitate improved rainfall management. In that regard, the city developed 3.94 hectares of green areas and planted more than 23,273 trees in 2022. Moreover, the projects are in line with the EU Adaptation Strategy, which calls for promoting nature-based solutions for adaptation. According to the European Commission, large-scale nature-based solutions will increase climate resilience and contribute to multiple objectives of the European Green Deal, with additional benefits related to biodiversity, water management and health. However, these efforts are only part of the possible range of relevant solutions to address climate change adaptation and resilience in cities, resulting in our assessment of a significant magnitude score for this category.

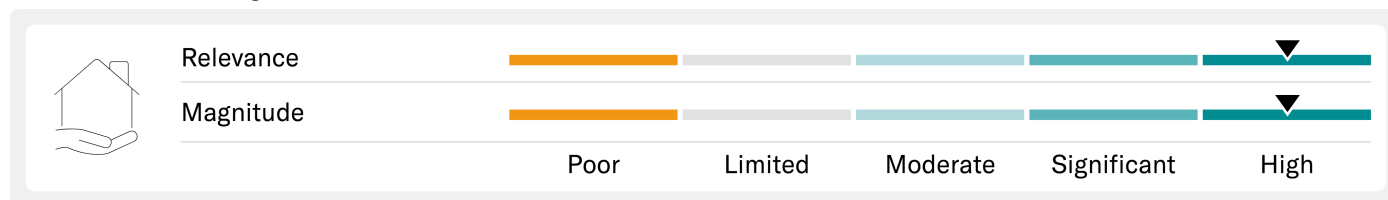
Access to essential services for targeted population



The category includes the financing a media library, addressing the mission of public services related to access to information and culture, demonstrating significant relevance. A media library provides access to digital technologies, such as the internet and computers, ensuring access to a wide range of public services such as unemployment services (France Travail) or families demand (Caisse d'Allocations Familiales). Those services require more and more an access to digital technologies, which not all populations have access to.

In terms of magnitude, the opening of a media library covering a diversity of crucial needs in a critical location is considered highly beneficial. It is located in a "Quartier Prioritaire de la Ville" (a priority district of the city) in the 19th arrondissement is the neighborhood counting the highest number of schools part of the Priority Education Network (REP). It is a free service, making it a valuable resource for Paris' most disadvantaged communities. Not only the library will offer access to free books and books rental, and access to the internet, it will also be a venue for co-working, integrating an urban farm and green spaces. The place will ensure to provide cultural and educative support to the youth, access to digitalization, support to student population, and arts support. Moreover, the building will be shared with the "Maison des réfugiés" enabling an integration of the most vulnerable, such as migrant population, and will have an easy access to culture. Therefore, not only the media library is a cultural space, it also encompass a social dimension.

Affordable social housing



The category, including both the renovation of substandard housing and the construction of new social housing units, is considered highly relevant to face the high demand for social housing in Paris. In 2020, 230,000 families applied for social housing. The number of social housing units within Paris' territory was 255,355 as of 31 December 2020. In 2021, the share of social housing reached 25.2% of all housing offering. According to a study by the National Institute of Statistics and Economic Studies, rent indexes in France have risen faster than consumer prices and gross disposable household incomes since the 1980s, leading to a sharp increase in the share of income allocated to housing expenses in recent years.

The eligible projects target substandard housing and build new social housing, and therefore make a high contribution to the quality of life of the most vulnerable populations in the long-term. The renovation of substandard housing has a highly positive long-term impact, both in terms of health and quality living conditions, as well as in terms of the environmental footprint of the renovated buildings (leading, for example, to increased energy efficiency). Building new social housing units increases their availability, and the issuer targets areas that currently have a social housing deficit, thus enhancing social cohesion. The definition of the target population is clear, with 60% of the social housing units earmarked for people under low or very low income thresholds.

Additional contribution to sustainability considerations

We have not made an adjustment to the preliminary contribution to sustainability score based on additional considerations.

We have not applied a negative adjustment for ESG risk management to the expected impact score. The City of Paris has described its general management of ESG externalities in the reporting, in this regard, the report is comprehensive. Multiple issues have been revealed by the study: such as the risks of the multiplication of heat waves having consequences on human life and civil infrastructure, biodiversity loss and flooding. At the local level, the city introduced its first Climate Action Plan in 2007, which was last updated in 2023 for the period 2024-2030. It includes more than 500 measures in favor of the fight against climate change. Moreover, the City of Paris conducted in 2021 a vulnerability and robustness climate change-related study. This study enables the city to anticipate the climate-related risks it will face in the future and to act upon them.

We have not applied a negative adjustment for coherence to the expected impact score. The projects financed by the 2022 sustainability bond are in line with the broader objectives set at the City of Paris level. The objectives include the 2018 updated Plan Climat Énergie that aims to reduce the city's energy consumption by 50% between 2004 and 2030, and to increase the quality of life with the following goal: zero Parisians to be exposed to pollution levels exceeding the permissible limits by 2024.

Appendix 1 - Alignment with principles scorecard for City of Paris' sustainability bond

Factor	Sub-factor	Component	Component score	Sub-factor score	Factor score	
Use of proceeds	Clarity of the eligible categories	Nature of expenditure	A	Best practices	Best practices	
		Definition of content, eligibility and exclusion criteria for nearly all categories	A			
		Location	A			
		BP: Definition of content, eligibility and exclusion criteria for all categories	Yes			
	Clarity of the objectives	Relevance of objectives to project categories for nearly all categories	A	Best practices		
		Coherence of project category objectives with standards for nearly all categories	A			
		BP: Objectives are defined, relevant and coherent for all categories	Yes			
	Clarity of expected benefits	Identification and relevance of expected benefits for nearly all categories	A	Best practices		
		Measurability of expected benefits for nearly all categories	A			
		BP: Relevant benefits are identified for all categories	Yes			
		BP: Benefits are measurable for all categories	Yes			
		BP: Disclosure of refinancing prior to issuance and in post-allocation reporting	Yes			
		BP: Commitment to communicate refinancing look-back period prior to issuance	Yes			
	Process for project evaluation and selection	Transparency and clarity of the process for defining and monitoring eligible projects	Clarity of the process	A		Aligned
			Disclosure of the process	A		
Transparency of the environmental and social risk mitigation process			A			
BP: Monitoring of continued project compliance			No			
Management of proceeds	Allocation and tracking of proceeds	Tracking of proceeds	A	Best practices		
		Periodic adjustment of proceeds to match allocations	A			
		Disclosure of the intended types of temporary placements of unallocated proceeds	A			
		BP: Disclosure of the proceeds management process	Yes			
		BP: Allocation period is 24 months or less	Yes			
Reporting	Reporting transparency	Reporting frequency	A	Aligned		
		Reporting duration	A			
		Report disclosure	A			
		Reporting exhaustivity	A			
		BP: Allocation reporting at least until full allocation of proceeds, and impact reporting until full bond maturity or loan payback	No			
		BP: Clarity and relevance of the indicators on the sustainability benefits	Yes			
		BP: Disclosure of reporting methodology and calculation assumptions	Yes			
		BP: Independent external auditor, or other third party, to verify the tracking and allocation of funds	No			
BP: Independent impact assessment on environmental and social benefits	No					
Overall alignment with principles score:					Aligned	

Appendix 2 - Mapping eligible categories to the United Nations' Sustainable Development Goals

The five eligible categories included in Ville de Paris' sustainability bond are likely to contribute to six of the United Nations' Sustainable Development Goals (SDGs), namely:

UN SDG 17 Goals		SDG Targets
GOAL 1: No Poverty	<i>Affordable social housing</i>	1.4: Ensure all have equal rights to economic resources, access to basic services, property ownership and finance
GOAL 3: Good Health and Well-being	<i>Access to essential services</i>	3.8: Achieve universal health coverage with access to quality and affordable essential health-care services and medicines for all
GOAL 4: Quality Education		4.A: Build and upgrade education facilities that provide safe and effective learning environments for all
GOAL 7: Affordable and Clean Energy	<i>Energy efficiency</i>	7.3: Double the global rate of improvement in energy efficiency
GOAL 11: Sustainable Cities and Communities	<i>Affordable social housing</i>	11.1: Ensure access for all to adequate, safe and affordable housing and basic services and upgrade slums
	<i>Clean transportation</i>	11.2: Provide access to safe, affordable, accessible and sustainable transport systems for all
	<i>Adaptation to climate change</i>	13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
GOAL 13: Climate Action	<i>Energy efficiency</i>	13.2: Integrate climate change measures into national policies, strategies and planning
	<i>Clean transportation</i>	

The United Nations' Sustainable Development Goals (SDGs) mapping in this SPO considers the eligible project categories and associated sustainability objectives/benefits documented in the issuer/borrower/lender's financing framework, as well as resources and guidelines from public institutions, such as the ICMA SDG Mapping Guidance and the UN SDG targets and indicators.

Appendix 3 - Summary of eligible categories in Ville de Paris' sustainability bond

Eligible Category	Eligible Project	Amount allocated (in million euros)	Impact reporting metric
Clean Transportation	Alternative modes of transport: Cycle facilities	28,14	km of bike lanes tons of GHG emissions avoided
	Public transport: Extension of metro line 14	11,47	km of line created tons of GHG emissions avoided number of beneficiaries
	Public transport: Extension of tramway line 3	70,37	km of line created tons of GHG emissions avoided number of beneficiaries
	Public transport: Redevelopment of the Porte Maillot	7,09	tons of GHG emissions avoided number of beneficiaries
	Public transport: Adaptation of Line 11 metro stations	9,54	km of line created tons of GHG emissions avoided number of beneficiaries
	Public transport: Extension of the RER EOLE line	43	km of line created tons of GHG emissions avoided number of beneficiaries
Energy efficiency	Buildings: Renovation of housing units	33,76	annual energy savings in MWh/year tons of GHG emissions avoided
Adaptation to climate change	Greening the public space: creation and transformation of hectares of	7,78	number of hectares tons of GHG emissions avoided
	Tree planting programme: 170,000 trees	5,89	number of trees tons of GHG emissions avoided
Access to essential services for targeted populations	Creation of the James Baldwin media library	5,51	number of beneficiaries
Affordable and social housing	Eradication of substandard housing	4,42	number of beneficiaries
	Social Housing Production Programme	123,03	number of units

Endnotes

¹ Point-in-time assessment is applicable only on date of assignment or update.

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