



International Finance Corporation Green Bond Second Opinion

21 December 2022; revised 3 March 2023

Executive Summary

The International Finance Corporation (IFC) is a multilateral institution promoting private sector growth in more than 100 developing countries. Owned by 186 member countries and part of the World Bank Group, IFC is among the world's largest financiers of climate-related projects in developing countries. At an organizational level, IFC has excluded greenfield coal power generation and upstream oil and gas from its portfolio but continues to invest in some heavy emitting industries, as well as downstream oil and gas in limited developing country contexts where gas is the lowest emitting option and a decarbonization plan can be developed.

IFC's green bond framework will seek to finance or refinance a broad range of project categories related to climate change mitigation and adaptation as well as reducing harm to or creating co-benefits for biodiversity and oceans and freshwater.

The allocation among these four main objectives as well as specific project categories is to be determined. Exclusions include fossil fuel production and distribution, projects where fossil fuels are the core source of energy, projects that support carbon intensive activities, hydropower, power projects with operational carbon intensity over 50 gCO₂e/kWh, hybrid assets that partly combust fossil fuels, and livestock projects. Updates to IFC's previous green bond framework

dated February 2022 include the addition of project categories related to biodiversity, oceans and water, 47 new climate mitigation categories, and stricter climate adaptation project selection processes.

We rate the framework **CICERO Medium Green** and give it a governance score of **Excellent**. Given the expansive and diverse nature of the framework, our review has been undertaken at a high level and the shading of eligible project categories varies significantly. A Medium Green overall shading is supported by sufficient project categories receiving Dark Green or Medium Green shadings, IFC's Excellent governance score, its conservative approach in applying criteria and exclusions in project selection processes, and its efforts to support both standard and innovative or undervalued green finance project categories. Projects receiving Dark Green or Medium Green shadings that are most aligned with a low-carbon, climate resilient future include renewable energy generation, waste management projects facilitating reuse and recycling, renewable energy-powered public transportation, and biodiversity conservation projects. Project categories assigned Light Green or Medium Green shadings that represent steps towards that 2050 vision but higher potential climate risks and impacts include agriculture and forestry, fisheries and aquaculture, bioenergy, ecotourism, water supply and treatment, shipping pollution prevention, and green buildings. IFC's Excellent governance score is due to its ambitious climate goals, robust selection procedures with strong environmental competence, and audited allocation and impact disclosures in its Annual Report. Harmonizing green bond framework criteria and guidance documents and prorating outcomes based on share of IFC financing in impact reporting are areas for further governance improvement.

SHADES OF GREEN



°CICERO
Medium Green

GOVERNANCE ASSESSMENT



GREEN BOND PRINCIPLES

Based on this review, this framework is found aligned with the principles.



Strengths

IFC's incorporation of new biodiversity and ocean and water categories, more robust climate adaptation selection processes, and financing for research, tools and technologies are significant strengths. The world's terrestrial and aquatic ecosystems are vital but often undervalued both from a climate and broader environmental perspective, making these inclusions welcome. It is also positive that IFC's adaptation project category will now avoid projects with fossil fuel lock-in risks and seek to identify solutions with both adaptation and mitigation co-benefits. We are further encouraged by IFC's inclusion of financing for research, tools, and technologies, as these are cross-cutting drivers of the climate transition and terrestrial, freshwater, and marine conservation.

IFC continues to maintain robust project selection processes and framework exclusions, which is particularly important due to the expansive nature of the framework. It is a clear strength that IFC has thorough and systematized procedures, embedded climate and environmental competence, and explicit exclusions of activities with significant climate risks such as fossil fuel-powered and livestock projects.

At an organizational level, IFC has ambitious climate goals for both its own operations and portfolio. IFC's commitment to aligning its new investments with Paris Agreement mitigation and adaptation goals by 2025 is especially notable, and we are encouraged to see the level of related implementation steps taken to date.

Pitfalls

IFC's extensive green bond framework contains overlapping project categories with different eligibility criteria and references to guidance documents that do not apply in whole or are modified by exclusions or additional criteria. While these aspects are understandable given the diverse nature of IFC's work and partners collaborating on some of the guidance documents, they have the potential to create difficulties determining eligibility during IFC's internal project selection processes and for investors working to understand potential environmental risks and benefits, which are particularly important due to the broad nature of the framework.

While IFC's selection processes are robust, some framework definitions and performance thresholds could be further clarified and strengthened. Numerous broadly defined categories create uncertainty as to what projects could be financed and what outcomes will be achieved. While there are some quantitative requirements, such as for 20% efficiency improvements compared to business-as-usual practices, projects that only meet or slightly exceed this threshold might have overall adverse effects depending on project design and context.

Where possible, we encourage IFC to more fully consider lifecycle and embodied emissions in project selection processes. For project categories that involve buildings and construction, water, energy, or transportation infrastructure, or appliances and equipment, emissions associated with materials and manufacturing as well as end of life disposal can be a significant share of overall climate impact. Bioenergy also has notable lifecycle emissions risks and framework emissions intensity thresholds for energy only cover operational emissions.

Careful project selection is particularly needed for projects that have novel elements or higher risks of fossil fuel lock-in, land use change, or biodiversity impacts. While potentially beneficial innovations are welcome, we encourage IFC to ensure emerging technologies or solutions, such as biodiversity credits and banking, undergo robust testing and monitoring before being deployed at scale. Projects with greater lock-in risks include shipping-related activities, while agriculture, forestry, bioenergy, and aquaculture are linked to ecosystem conversion risks, and projects related to fisheries and ecotourism can have biodiversity risks.

IFC's impact reporting could be strengthened by prorating outcomes based on share of IFC financing. While it is positive that IFC does not claim full attribution and instead considers how it has increased access to green finance, further transparency could be provided by estimating prorated impacts as well. Risks of double counting impacts from IFC financing third-party green bonds should also be considered.



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1 IFC's environmental management and green bond framework

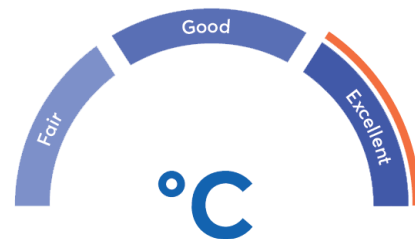
Issuer description

The International Finance Corporation (IFC) is a multilateral institution promoting private sector growth in more than 100 developing countries. Owned by 186 member countries and part of the World Bank Group, IFC seeks to support economic development through market creation, investor mobilization, and capacity-building in order to end extreme poverty and promote shared prosperity across all countries by 2030.

IFC is among the world's largest financiers of climate-related projects in developing countries, having invested USD 32 billion and mobilizing an additional USD 26 billion for these efforts since 2005. Under previous green bond frameworks including the most recent update from February 2022, IFC has issued USD 10.5 billion across 178 bonds as of 30 June 2022.

Governance assessment

IFC has ambitious, timebound climate goals for both its own operations and portfolio. IFC's commitments to scaling up the share of its climate-related investments to 35% of own-account volumes between 2021-2025 and aligning new investments with Paris Agreement goals by 2025 are notable strengths. Although these definitions and approaches are still under development, we are encouraged by IFC's consideration of both mitigation and adaptation aspects as well as steps taken to date on developing tools, guidance, and trainings to support implementation. While it is positive that coal and upstream oil and gas are excluded from IFC investments, we encourage the organization to also phase out downstream oil and gas investments and incorporate climate aspects into all projects with heavy emitting sectors to support Paris Agreement alignment efforts. Other strengths include that IFC has instituted physical climate risk screenings for all investments at the project or asset level, that it reports in accordance with the Taskforce on Climate-Related Financial Disclosures (TCFD) guidance, and that it is continuing to target further operational emissions reductions to limit its reliance on offsets.



IFC has created robust project selection procedures including baseline environmental and social safeguards as well as additional criteria such as Paris Agreement alignment, screening for potential controversial issues, and integrity due diligence. It is positive that IFC's Climate Business Department metrics staff determine projects' eligibility and have veto power in selection processes, investments are supervised for climate and environmental performance on a project level, and one in four undergo performance assessment by the World Bank Group's Independent Evaluation Group. Where possible given the global and wide-ranging nature of its work, we encourage IFC to further harmonize and streamline its green bond framework and the four associated guidance documents related to climate mitigation, adaptation, biodiversity protection, and ocean and water protection. Clarifications would be particularly useful to ensure robust selection processes and communicate to investors where there are overlapping categories with slightly different eligibility criteria or where IFC green bond requirements are more stringent than guidance document criteria. This is particularly important due to the broad and diverse nature of framework project categories. Incorporating climate emissions lifecycle assessment could be another area for further strengthening selection processes.



IFC will report annually on green bond allocation and impact, both aspects of which will undergo internal review. The aggregate impact numbers are audited as part of IFC's Annual Report disclosures. Strengths include reporting on a project-level basis and committing to alignment with International Capital Market Association (ICMA) Green Bond Principles' Handbook guidance. While it is positive that IFC does not claim full attribution and instead considers how it has increased access to green finance, reporting could be strengthened by estimating prorated impacts as a portion of IFC's contribution as well.

The overall assessment of IFC's governance structure and processes gives it a rating of **Excellent**.

Sector risk exposure

Physical climate risks. More frequent and extreme weather events can significantly impact the value and impact of a multilateral development institution's portfolio of investments across diverse sectors and geographies. More intense storms, flooding, sea level rise, droughts, fires, and heat stress are expected to increase due to climate change. While often having contributed the least to historical global climate emissions, the developing countries in which multilateral development institutions like IFC work are often more exposed and less prepared adapt to these physical risks compared to wealthier countries. Physical climate impacts therefore threaten multilateral development banks' long-term financial health as well as the success of their economic development initiatives.

Transition risks. Due to the profound changes needed to limit global warming to well-below 2°C, transition risk affects all sectors. Multilateral development banks like IFC are exposed to transition risks that could threaten the long-term value of its investments as well as the effectiveness of its development initiatives. These could include policies that increase the cost of carbon, changes in consumer behaviour or demand, and pressure from stakeholders for greater mitigation and transparency. Investments in fossil fuel efficiency, heavy-emitting industries, or agribusiness with potential links to deforestation, are particularly exposed. Development institutions like IFC also face more direct reputational risks, oversight risks (e.g., increasing disclosure and other climate risk management requirements), and liability risks (e.g., lawsuits related to inadequate climate risk management or harmful climate impacts).

Environmental risks. For development institutions like IFC, environmental risks are primarily through their financing, with diverse potential impacts on portfolio performance and reputation depending on the sector and geography of specific investments. Dependencies and impacts on nature should be assessed. Screening and mitigating actions should be undertaken to avoid threats to biodiversity and ecosystems, local pollution, water overuse, improper waste disposal, or other environmental risks most relevant to different investees.

Social risks. Human rights and labour rights risks are ongoing concerns in the diverse developing country contexts where development institutions like IFC work with vulnerable groups. Efforts should be made to ensure investees provide essential services such as clean water and sanitation without discrimination among potential beneficiaries. In the context of biodiversity and ocean and water protection-related financing, we note particularly the risks of forced and child labour, workers' rights and safety violations, and human trafficking in the fishing, shipping, and seafood processing industries, as well as indigenous and other local community concerns related to protected area restrictions and tourism development.



Environmental strategies and policies

Since 2009, IFC reports that it has been carbon neutral in its Scope 1 and 2 emissions and Scope 3 business travel. In FY20, these operational emissions totalled 47,024 tonnes CO₂e prior to offsetting, with the largest sources from business air travel (34,692 tonnes CO₂e) followed by office electricity use (8,583 tonnes CO₂e). Operational emissions reduction measures include heating, cooling, and lighting efficiency at IFC buildings as well as the use of offsets. Offset projects include renewable energy, energy efficiency, waste management, forestry, and ozone depleting substance projects with a focus on low and lower-middle income countries. IFC has a target to reduce its building-related emissions by 20% by 2026 compared to 2016.

IFC does not yet report on total financed emissions across its portfolio. It discloses aggregated greenhouse-gas (GHG) emissions reductions from its investments as well as project-level emissions for those with more than 25 kilotonnes carbon dioxide equivalent (ktCO₂e) emissions. To date, IFC estimates it has avoided 23.4 million tonnes carbon dioxide equivalent (tCO₂e) through its green bond program.

In line with the World Bank Group's climate targets, IFC's climate investments will target, on average, 35% of IFC's own-account investment volume over the fiscal years 2021–2025 period. In FY22, USD 4.4 billion of IFC's own account investments was dedicated to climate-smart financing, achieving this target.

In April 2021, the World Bank Group committed to aligning financing flows with the objectives of the Paris Agreement. It defines mitigation alignment in terms of investments that do not have negative impacts on decarbonization pathways, support low or net zero emissions activities, or are in line with a country's transition. Mitigation aligned investments should also avoid long-term lock in, stranded assets, and other transition risks. Adaptation and resilience alignment is defined as identifying and managing vulnerability to physical climate risks while aligning with country-specific development pathways. IFC has committed to aligning 85% of new investments with the objectives of the Paris Agreement starting July 1, 2023 (FY24), and 100% of new investments starting July 1, 2025 (FY26). Alignment with the objectives of the Paris Agreement will be based on an approach developed jointly by IFC and other multilateral development banks covering direct and indirect investments as well as project and corporate finance. In addition, IFC has developed guidance, tools, and sector-specific methodologies and begun piloting these Paris alignment approaches, integrating them into existing business processes, and providing trainings for investment staff.

IFC does not invest in greenfield coal power generation or upstream oil and gas. Additionally, it does not provide loans to financial institutions for coal-related activities and no longer provides general purpose loans to financial institutions in order to avoid potential coal exposure. Downstream oil and gas investments (e.g., gas distribution, thermal power generation) are still permitted. IFC also supports heavy emitting industries including cement, waste treatment and management, chemicals, glass, and animal production; these investments may but are not required to have sustainability aspects. In its oceans and water portfolio, IFC explicitly excludes drift net fishing using nets in excess of 2.5 kilometres in length. Financial intermediaries working with IFC must also exclude commercial logging operations for use in primary tropical moist forest and production or trade in wood or other forestry products other than from sustainably managed forests.

IFC has a Sustainability Framework in place, which promotes environmental and social practices as well as transparency and accountability. This framework includes a Policy on Environmental and Social Sustainability that defines IFC's commitments on these topics; IFC's Performance Standards, which define clients' responsibilities for managing their environmental and social risks; and IFC's Access to Information Policy, which articulates IFC's commitment to transparency.

IFC has instituted physical climate risk screening for all investments at the project or asset level, assessed portfolio transition risk hotspots, instituted internal carbon pricing to avoid lock-in effects and stranded assets, and trained



key employees on climate finance risk. It does not currently undertake scenario analysis, having found current methods unsuitable for IFC's portfolio, but it is working to develop an internal approach, such as through piloting scenario analysis at the sector level for its transportation-related investments. In FY22, IFC's Corporate Risk Committee established a Climate Risk Working Group led by its Corporate Risk Management and Climate-Business departments to manage exposure to climate risks at the portfolio and balance sheet level, including exploring how to incorporate climate into its stress testing processes.

Since 2018, IFC has reported in accordance with the Taskforce on Climate-Related Financial Disclosures (TCFD). It also provides additional sustainability disclosures as part of its annual report.

IFC's climate integration is undertaken by the Climate Business Department, which collaborates with and provides expertise to the investment departments engaging with clients. Climate strategy and performance is overseen by the IFC Managing Director and Executive Vice President, who reports to the President of the World Bank Group and World Bank Group Board of Directors.

IFC is a member of various sustainability and green finance collaborative initiatives, such as the Principles for Responsible Investment, TCFD, the Task Force on Nature-Based Financial Disclosures (TNFD), the Global Green Bond Partnership, the Green Bond Principles, and the Carbon Pricing Leadership Coalition.

Green bond framework

Based on this review, this framework is found to be aligned with the Green Bond Principles. For details on the issuer's framework, please refer to the green bond framework dated December 2022.

Use of proceeds

For a description of the framework's use of proceeds criteria, and an assessment of the categories' environmental impacts and risks, please refer to section 2.

Selection

Definitions of eligible activities are based on:

- **Climate mitigation:** The "Common Principles for Climate Mitigation Finance Tracking" developed by a coalition of multilateral development banks (MDBs) and the International Development Finance Club (IDFC). Eligible projects must contribute substantially to climate mitigation either through (1) negative- or very-low-emission activities, which result in negative, zero or very low GHG emissions and full compliance with the long-term temperature goal of the Paris Agreement or (2) activities that enable other actions that make a substantial contribution to climate mitigation.
- **Climate adaptation:** The "Common Principles for Climate Change Adaptation Finance Tracking" developed by the joint MDBs and IDFC in 2015 and updated in 2021.
- **Biodiversity protection:** IFC's "Biodiversity Finance Reference Guide" released in November 2022. Eligible projects include (1) investment activities that seek to generate biodiversity co-benefits within or through established business operations and production practices, (2) investments in biodiversity conservation and/or restoration as the primary objective, and (3) investments in nature-based solutions to conserve, enhance, and restore ecosystems and biodiversity. Only projects that have available documentation and evidence confirming a substantial contribution to biodiversity protection or measurable impact are eligible.
- **Ocean and water protection:** "IFC's Guidelines for Blue Finance" released in January 2022. Eligible projects include (1) investment activities that seek to generate biodiversity co-benefits within or through established business operations and production practices, (2) investments in biodiversity conservation and/or restoration as the primary objective, and (3) investments in nature-based solutions to conserve,



enhance, and restore ecosystems and biodiversity. Only projects that have available documentation and evidence confirming a substantial contribution to ocean and water protection or measurable impact are eligible.

Being included in these definitions is necessary, but not sufficient for IFC green bond financing. IFC's green bonds will only finance a sub-section of IFC's broader climate mitigation and adaptation, biodiversity protection, and ocean and water protection activities.

Eligible green projects must comply with IFC's Sustainability Framework, i.e., IFC's Policy and Performance Standards on Environmental and Social Sustainability, Access to Information Policy, Environmental, Social and Corporate Governance Assessment, and Corporate Governance Methodology. This means that these projects have been evaluated by IFC's social and environmental specialists at an early stage and screened for potential environmental and social impacts. Activities that support the fossil fuel industry, livestock, or deforestation are screened out. If necessary, policies and concrete actions are put in place to mitigate any such impacts in accordance with IFC Environmental, Health, and Safety Guidelines.

Additionally, eligible projects must meet IFC's Paris Agreement alignment goal and pass additional requirements related to disclosure, consultation, and integrity due diligence processes. The issuer informed us that beyond framework criteria, the portfolio will be additionally screened for any potential controversial issues including negative/high ESG risks, which will lead to removal from the list of green bond eligible projects. According to IFC, lifecycle emissions are calculated only in limited cases (e.g., product to product comparison) where reliable information is available. In addition, IFC has an Anticipated Impact Measurement and Monitoring (AIMM) system in place. This enables IFC to estimate the expected development impact of its investments and select projects with the greatest potential for financial sustainability and development impact.

Biodiversity protection and ocean and water protection eligible activities must also be consistent with the Green Bond Principles and Green Loan Principles, contribute to relevant Sustainable Development Goals (SDGs), and have limited risks to other SDGs. Eligible biodiversity-focused activities under the framework must also address a key driver of biodiversity loss, which IFC defines as land- and sea-use change, overexploitation and unsustainable use of nature, pollution, invasive species, and climate change. For ocean and water protection-related financing, in some cases, industry- or product-specific sustainability standards, such as Marine Stewardship Council (MSC) or Aquaculture Stewardship Council (ASC) certification, may also be applied.

IFC includes in its framework indirect investments such as third-party green bonds where the framework complies with the Green Bond Principles, has a second party opinion, and commits to public reporting. According to IFC, as of today only third-party green bonds that are entirely dedicated to renewable energy or green buildings are recommended to be included in IFC Green Bond Program. However, IFC informs us that going forward, third-party green bonds with use of proceeds on biodiversity and ocean and water protection objectives will be assessed to determine their inclusion in the IFC Green Bond Program. Third-party frameworks can represent projects with different ambition levels. IFC informed us that it often acts as an anchor investor in green bonds where it had assisted the issuer in meeting best practice standards before issuance. In addition, if a third-party green bond investment does not meet the eligibility criteria under IFC's green bond framework, it will not be funded by proceeds under this framework.

IFC also aims to ensure that climate finance is available for smaller activities that it cannot reach directly, such as through financing to small and medium enterprises through financial intermediaries. The partner financial intermediaries assess climate impacts of their loan portfolio in real time with the support of the online CAFI platform (Climate Assessment for Financial Institutions) for the evaluation, selection and reporting process. The CAFI platform has been reviewed by Ernst & Young, which has provided reasonable assurance confirming that it



aligns to the IFC Definitions and Metrics for Climate Related Activities. These investments must also meet the criteria under IFC's green bond framework to be eligible for associated green financing.

IFC's climate-related projects are classified in iDesk, IFC's record-keeping system, by the Climate Business Department (CBD) team through the fiscal year before project commitment. All climate-related projects are subject to review by the CBD in collaboration with regional and global climate change teams to determine a project's eligibility based on the requirements above. The selection of eligible green bond projects is primarily done by the CBD climate metrics staff, and the final list is cleared by the CBD manager and agreed with Treasury. According to IFC, ultimately around eight staff (six from CBD and two from Treasury) are wholly involved in the decision-making process.

IFC supervises all its investments – including those focused on climate mitigation and adaptation, biodiversity protection, and ocean and water protection – on a project level. The supervision process comprises regular reports by the investee company on project activities and performance and is monitored by IFC throughout the lifetime of the investment. If supervision reveals any sustainability and/or financial problems in a project funded by a green bond, it will be removed from the green bond portfolio.

In addition, the World Bank Group's Independent Evaluation Group (IEG) assesses the performance of about one out of four projects, measuring outcomes against original objectives, sustainability of results and institutional development impact. The Office of the Compliance Advisor/Ombudsman (CAO) oversees investigations of IFC's social and environmental due diligence at the project-level, provides an independent complaints and accountability mechanism, and addresses complaints by communities affected through projects. According to the issuer, projects will be removed from the green bond portfolio in case the Office of Compliance receives a complaint in a specific project which has been funded with proceeds from green bonds.

Management of proceeds

Green bond proceeds are tracked by the issuer. The proceeds from IFC's green bonds are allocated to a sub-portfolio in IFC Treasury. Disbursements are often made over a period of time, depending on a project's disbursement schedule. As green bond proceeds are disbursed, corresponding amounts are adjusted from the sub-portfolio accordingly. In a few cases of back-to-back financing, proceeds from green bonds are on-lent by IFC directly to an individual eligible project through a specific funding program such as a Masala or other local currency bonds. Local currency loans funded via a cross-currency swap or project-related green bond issuance are eligible.

Unallocated proceeds are invested in accordance with IFC's liquidity policy until disbursement to eligible projects. Investment of unallocated proceeds is subject to an exclusion list that includes, among others, coal and peat extraction as well as upstream oil and gas activities. IFC does not expect to have significant amount of unallocated proceeds as issuance volume is projected by the pipeline of eligible projects.

Reporting

Green bond allocation and impact reporting will cover selected eligible projects across IFC's four objectives: climate mitigation, climate adaptation, biodiversity protection, and ocean and water protection. On an annual basis, IFC publishes the list of projects that are eligible to receive funding from green bond proceeds. Subject to confidentiality approvals, the list of projects includes: a brief description of the project, the amount committed, the expected environmental impact(s) and links to relevant public documents about the project. According to the issuer, it reports on all projects that have received funding from a green bond. In the rare case where project details cannot be disclosed due to confidentiality reasons, the project will be removed from the green bond portfolio. IFC's annual Green Bond Impact Report and the indicators used therein are based on the recommendations of the International Capital Market Association (ICMA) Green Bond Principles' Handbook – Harmonized Framework for Impact



Reporting and are published on IFC's website. According to the issuer, IFC's impact reporting indicators are not predetermined and will be selected from relevant core indicators in the Handbook. They may include annual climate emissions reduced or avoided, renewable energy generation, or waste prevented, reused, recycled, collected, or treated. IFC informs us that baselines are established on a case-by-case basis referencing estimates for the scenario that would occur in the absence of an IFC green bond project. These scenarios are developed through desk review, on-site due diligence, and expert judgment.

The impact indicators are tracked on a project level basis and are not pro-rated for the portion of IFC's contribution. IFC's reporting describes the overall impacts to which its financing contributes and IFC does not claim full attribution for those outcomes. Impact of direct investments is based on ex-ante estimates (developed prior to project implementation) of expected annual results for a representative year once a project is completed and operating at normal capacity. Impact of indirect investments (i.e., through financial intermediaries) are conservatively estimated based on the likely allocation of use of proceeds among the eligible project types and are framed as IFC increasing access to green finance rather than claiming attribution. IFC also links the green bond projects to relevant Sustainable Development Goals.

Allocation and impact reporting follows a thorough in-house vetting process through which several levels of internal reviews and audits take place. This reporting is also linked to the aggregate reporting in the annual report which undergoes an external audit.

In addition to green bond reporting, IFC's climate-related portfolio – from which green bond-eligible projects are selected – is reported through several channels, e.g., in the annual report. In addition, IFC also participates in the Joint Report on Multilateral Development Banks' Climate Finance, which utilizes harmonized climate definitions.

IFC's green bond reporting under previous frameworks has included total green bond issuance, amount outstanding, project breakdown by region and sector, a detailed project list, and case studies. It also detailed impacts such as estimated climate emissions reductions, renewable energy production, energy efficiency savings, and green building area.



2 Assessment of IFC's green bond framework



The eligible projects under IFC's green bond framework are shaded based on their environmental impacts and risks, based on the "Shades of Green" methodology.

Shading of eligible projects under IFC's green bond framework

- Proceeds will be used to finance or refinance activities or assets related to one of four IFC objectives: climate change mitigation, climate change adaptation, biodiversity protection, or ocean and water protection. Most biodiversity protection or ocean and water protection project categories are related to reducing harm to or generating co-benefits for nature from other commercial and economic activities.
- Refinancing may occur when IFC invests in third-party green bonds. Equity investments and other financial products such as guarantees, rights, etc. are ineligible for funding via green bond proceeds.
- The allocation among green bond project categories is to be determined. Under the previous green bond framework (which did not include biodiversity or ocean and water protection), IFC reported FY21 allocations of 47% to renewable energy projects (USD 487 million), 33% to energy efficiency projects (USD 342 million), and 20% to other mitigation projects (USD 212 million). While around 11% of green financing (USD 79 million) was allocated to adaptation projects in FY20, this category remains marginal for financing.
- Where project categories overlap among the four objectives, IFC informs us it will either apply all potentially applicable criteria or, if mutually exclusive, the strictest criteria. IFC also notes that unless stated otherwise, eligible projects should achieve at least a 20% performance improvement compared to business-as-usual practices in any applicable efficiency measures (e.g., energy, water use, fertilizer use).
- Explicit exclusions from eligibility under the framework are:
 - a. Projects involving new or existing extraction, production, and distribution of fossil fuels, including improvements and upgrades.
 - b. Projects where the core source of energy is based on fossil fuels and other projects that support carbon intensive activities.
 - c. Hydropower projects.
 - d. Any power project with a carbon intensity above 50 gCO₂eq/kWh. The issuer informs us this is calculated on an operational basis including Scopes 1, 2, and 3 but does not include full lifecycle emissions.
 - e. Assets that partly combust fossil fuels, such as hybrid vessels. Only replacement of existing fleets with electric or hydrogen-based fleets is eligible.
 - f. Livestock projects.



Climate Mitigation Categories

Category	Eligible project types	Green Shading and considerations
Climate Mitigation  	1. Generation of renewable energy with low lifecycle greenhouse gas emissions supplying electricity, heating, mechanical energy, or cooling.	Dark to Medium Green <ul style="list-style-type: none"> ✓ Renewable energy is much needed in a 2050 perspective. While solar, wind and geothermal projects are considered Dark Green, the category is also assigned a Medium Green shade due to the inherent risks associated with bioenergy. Because of resource constraints and potential biodiversity concerns, biomass-based electricity in particular is unlikely to represent a significantly scalable solution from a 2050 decarbonised energy perspective. ✓ The issuer informs us that all renewable energy projects must be below 50 gCO₂e/kWh on an operational basis, but lifecycle emissions are calculated only in limited cases. While this threshold is positive, we encourage the issuer to consider lifecycle impacts such as renewable energy infrastructure or feedstock embodied emissions, construction processes, and end of life where possible. During project design and construction, also be aware of resilience concerns, land use and biodiversity impacts, and local pollution. According to the issuer, some of these aspects are covered by IFC’s Performance Standards. ✓ According to IFC, biomass is a very minor fraction of climate business and even less in the green bond program. Bioenergy is widely seen as a renewable energy source due to its reliance on plant growth which absorbs CO₂ in the growing phase. However, bioenergy assets emit CO₂ at combustion – often at levels comparable to coal. ✓ Biofuel feedstocks are also a concern from a lifecycle emissions perspective depending on aspects such as deforestation risks and transportation distances. The issuer informs us that feedstocks can include waste cooking oil, biomass produced on formerly degraded land, or residues from sustainable forest management (e.g., FSC or PEFC certified), which have lower emissions risks than food and feed crop feedstocks. The



issuer also notes that IFC Performance Standards ensure there is no deforestation or impacts on food security and it requires positive climate benefits from biomass-related projects.

- ✓ In an update from its previous green bond framework, all hydropower projects, even small run-of-the-river hydropower, are ineligible under a new framework exclusion.



2. Production, storage, or use of low-carbon hydrogen. **Dark to Medium Green**



- ✓ According to the issuer, only green hydrogen (i.e., produced from water and renewable electricity) and not blue hydrogen (based on natural gas) is eligible under the framework. Green hydrogen is part of a 2050 solution due to applications in industrial processes, transportation, and energy storage.
- ✓ Be aware of the significant amounts of renewable energy required for green hydrogen production at scale and associated lifecycle emissions and environmental risks.
- ✓ Energy storage is also crucial for facilitating greater integration of renewables and part of a 2050 solution. However, hydrogen storage may entail risks to climate warming that are not yet fully understood, which are reflected in the shading.
- ✓ Leakage of stored hydrogen is difficult to avoid due to small molecule size and low density. Impacts from leakage of stored hydrogen to the atmosphere are not yet well-understood, but emerging research indicates it increases the atmospheric lifetime of methane and its climate impacts, partially offsetting its emissions reduction benefits, and may contribute to Antarctic ozone depletion. High flammability also entails a hazard.
- ✓ Any conversion of underground gas storage facilities to hydrogen will require measures to avoid venting residual methane into the atmosphere.



3. Use of waste gas as a feedstock or fuel to supply electricity, heat, mechanical energy or cooling.

Light to Medium Green

- ✓ The issuer informs us that this category will focus on biogas. Methane from abandoned mines or existing coal mines, coalbed methane, and gas from greenfield oil or coal production are ineligible under fossil fuel exclusions.
- ✓ Biogas is a positive part of the circular economy, as it forms part of a closed loop in which waste, wastewater, forestry and industrial residues are used in renewable products such as fuel, electricity and heat, avoiding methane emissions into the atmosphere. Biogas is normally produced from organic waste that has few other uses: this is positive from a resource efficiency perspective.
- ✓ The production and use of biogas entails some emissions (including methane leakage) and pollutant discharges to the local environment that should be minimized.



4. Brownfield conversion from production of one type of energy, or from desalination only, to joint generation or delivery for use of electricity, heat, mechanical energy, cooling, or desalination.

Dark to Medium Green

- ✓ Combined heat and power or waste heat recovery solutions are positive from an energy efficiency and emissions reduction perspective. The issuer informs us that fossil fuel-based energy systems are ineligible under green bond framework exclusions.
- ✓ Medium Green shading is included due to the potential use of bioenergy and associated lifecycle emissions risks. Be aware of other risks and impacts associated with renewable energy as detailed in project category #1 above.
- ✓ Consider that while desalination projects can enhance resilience, they are highly energy intensive and should be run on renewable energy sources. Copper and chlorine effluents must also be managed appropriately, which IFC informs us is covered under its Performance Standards.



5. Brownfield energy-efficiency improvement in energy **Dark to Medium Green**

production to supply electricity, heat, mechanical energy, or cooling.

- ✓ Efficiency in energy production is positive from a resource use and emissions reduction perspective. The issuer informs us that fossil fuel-based energy systems are ineligible under green bond framework exclusions.
- ✓ According to the issuer, projects must achieve at least a 20% reduction in emissions compared to business-as-usual practices.
- ✓ Medium Green shading is included due to the potential use of bioenergy and associated lifecycle emissions risks. Be aware of other risks and impacts associated with renewable energy as detailed in project category #1 above.



6. Energy storage or measures to improve network **Medium to Dark Green**

stability that increase consumption of very low-carbon energy.

- ✓ Energy storage is crucial for facilitating greater integration of renewables and part of a 2050 solution. However, certain technologies in this category may entail risks to climate warming and climate resilience (in terms of possible water-related impacts) that are not yet fully understood, which are reflected in the shading.
- ✓ According to IFC, storage systems are eligible if they enable renewable energy integration into the grid. They are usually on-site and help manage the intermittency of renewable energy projects. Fossil fuel-based energy systems are ineligible under green bond framework exclusions.
- ✓ Be aware of other risks and impacts associated with renewable energy production and hydrogen production and storage as detailed in project categories #1 and #2 above.
- ✓ Storage of thermal energy involves storing heat underground. Such systems may have adverse impacts on subsurface hydrology, groundwater chemistry and thermal balance, and microbiology. Drilling may also entail adverse impacts on the local environment and biodiversity.
- ✓ Storage of electricity can involve the use of batteries, compressed air, flywheels, thermal energy conversion, and power-to-gas technology, which have different environmental risks and impacts. IFC is unable to provide visibility on the type of storage in which it will invest. Be aware that battery material sourcing can have



significant emissions and other environmental impacts, and improved battery recycling at end of life is needed.

- ✓ The issuer informs us that some of these risks and impacts are covered by its Performance Standards.
- ✓ Pumped storage hydropower is ineligible under framework hydropower exclusions.



7. Greenfield transmission or distribution of electricity that increases the share of very low-carbon electricity delivered. **Dark to Medium Green**



- ✓ Construction of transmission lines are only eligible if they exclusively serve renewable energy supply.
- ✓ Medium Green shading is included due to the potential use of bioenergy and associated lifecycle emissions risks. Be aware of other risks and impacts associated with renewable energy as detailed in project category #1 above.
- ✓ Be aware of embodied emissions associated with transmission and distribution infrastructure materials, particularly in the context of greenfield developments, as well as emissions and local environmental and biodiversity impacts associated with construction.



8. Greenfield high-efficiency transmission or distribution of heat or cooling energy. **Dark to Medium Green**



- ✓ Construction of transmission infrastructure is only eligible if the heat or cooling energy is exclusively from renewable sources.
- ✓ Medium Green shading is included due to the potential use of bioenergy and associated lifecycle emissions risks. Be aware of other risks and impacts associated with renewable energy as detailed in project category #1 above.
- ✓ Be aware of embodied emissions associated with transmission and distribution infrastructure as well as emissions and local environmental and biodiversity impacts associated with construction.



9. Brownfield replacement of equipment or processes based on fossil fuels with electrical equipment or processes components.

Medium Green

- ✓ Electrification of equipment or processes as a substitute for fossil fuels is a critical contribution to the low carbon future.
- ✓ According to the issuer, electricity ultimately used by the equipment will in most cases be sourced from local grids with varying degrees of renewables and fossil fuel sources. To be eligible under IFC's green bond framework, equipment should in practice either use 100% renewable electricity or demonstrate a greater than 20% Scope 1 and 2 emissions savings compared to fossil fuel powered equipment.
- ✓ Be aware of equipment materials sourcing and embodied emissions as well as end of life risks. While IFC does not set an energy efficiency standard, the issuer informs us that equipment should be best in class in terms of energy efficiency.
- ✓ IFC's framework exclusions apply but be aware that end users of this equipment are not specified and could include heavy emitting industries that may have significant fossil fuel use elsewhere in their operations.



10. Energy storage or smart industrial-scale solutions to increase integration of very-low-carbon energy or use of previously waste energy.

Medium to Dark Green

- ✓ Energy storage is crucial for facilitating greater integration of renewables and recovering waste energy. These measures are part of a 2050 solution. However, certain technologies in this category may entail risks to climate warming and climate resilience (in terms of possible water-related impacts) that are not yet fully understood, which are reflected in the shading.
- ✓ Be aware of other risks and impacts associated with energy storage as detailed in project category #6 above.
- ✓ According to the issuer, use of previously wasted energy may be achieved through smart sensors, flow devices and smart switches. Be aware of embodied emissions in these materials.



11. Projects that support production of components, equipment or infrastructure dedicated exclusively to utilization in the renewable energy, energy efficiency improvement, or other low-carbon technologies.

Medium to Light Green

- ✓ Renewable energy, energy efficiency, and other low-carbon technology components, equipment, and infrastructure will be needed to facilitate a transition to a low carbon future. While these may in many cases be Dark Green solutions, the broad nature of this category and lack lifecycle considerations or criteria lead to the shading interval.
- ✓ Be aware of component, equipment, and infrastructure embodied emissions as well as emissions during construction, use, and end-of-life. While IFC does not set an energy efficiency standard, the issuer informs us that equipment should be best in class in terms of energy efficiency. Consider risks of rebound effects. We encourage IFC to undertake lifecycle assessments where possible to ensure net benefits from these projects.
- ✓ IFC's framework exclusions apply but be aware that end users of this equipment are not specified and could include heavy emitting industries that may have significant fossil fuel use elsewhere in their operations.



12. Reduction in energy consumption in agriculture.

Light to Medium Green

- ✓ Reducing energy consumption in agriculture is positive. IFC requires a 20% or greater improvement compared to business-as-usual practices.
- ✓ According to the issuer, only agricultural activities consistent with IFC's Performance Standards are eligible (e.g., those that avoid deforestation or other environmentally harmful land use change). The issuer informs us that under framework exclusions, livestock and activities introducing new fossil fuel-based technologies such as fossil fuel-based agricultural machinery or irrigation systems are ineligible.
- ✓ Be aware that while these criteria screen out some of the most environmentally or socially harmful types of agricultural production, a broad range of agricultural activities with diverse climate and environmental risks remains eligible, leading to the shading interval.





13. Agricultural projects that contribute to increasing the carbon stock in the soil or avoiding loss of soil carbon through erosion control measures. **Light to Medium Green**

carbon stock in the soil or avoiding loss of soil carbon through erosion control measures.

- ✓ Enhancing agricultural soil health through carbon sequestration and erosion control are important for climate mitigation, resilience, and downstream water quality. The issuer informs us on-site appraisals and soil analyses are undertaken to ensure projects achieve intended benefits.
- ✓ According to the issuer, only agricultural activities consistent with IFC's Performance Standards are eligible (e.g., those that avoid deforestation or other environmentally harmful land use change). The issuer informs us that under framework exclusions, livestock-related projects and fossil fuel-based technologies are ineligible.
- ✓ Be aware that while these criteria screen out some of the most environmentally or socially harmful types of agricultural production, a broad range of agricultural activities with diverse climate and environmental risks remains eligible, leading to the shading interval.



14. Reduction of non-CO₂ greenhouse gas emissions from agricultural practices or technologies. **Light to Medium Green**

agricultural practices or technologies.

- ✓ Managing non-CO₂ emissions in agriculture such as methane or nitrogen is an important contribution to the climate transition. According to the issuer, projects must achieve at least a 20% reduction in emissions compared to business-as-usual practices and could include more efficient fertilizer application, improved crop breeds requiring fewer inputs, or water management in paddy rice.
- ✓ According to the issuer, only agricultural activities consistent with IFC's Performance Standards are eligible (e.g., those that avoid deforestation or other environmentally harmful land use change). The issuer informs us that under framework exclusions, livestock-related projects including manure management and activities using fossil fuel-based technologies or inputs including fertilizer are ineligible. Genetically modified organisms (GMOs) are also ineligible.
- ✓ Be aware that while these criteria screen out some of the most environmentally or socially harmful types of agricultural production, a broad range of agricultural activities with diverse climate and environmental risks remains eligible, leading to the shading interval.





15. Forestry or agroforestry projects that sequester carbon **Light to Medium Green**

through sustainable forest management, avoiding deforestation and land degradation.

- ✓ Forestry and agroforestry systems can have both climate and biodiversity benefits if undertaken sustainably.
- ✓ According to the issuer, projects are screened using Performance Standard safeguards against deforestation and other harmful land use change and monitored through site analysis and satellite imagery.
- ✓ The issuer informs us that certifications such as FSC or PEFC are required for eligibility. Sustainability certifications for forest management can cover many important environmental topics and can verify improved on-site practices. At the same time, certification systems vary significantly in stringency, can contain loopholes and pitfalls, and in many cases cannot adequately address larger systemic issues.
- ✓ Plantations are eligible under this category and could come with associated environmental risks, such as reduced benefits to biodiversity and lower climate resilience. However, according to the issuer, these issues are heavily addressed by IFC's Sustainability Framework and Performance Standards.
- ✓ Be aware forestry residues for biomass would be eligible if they meet emissions thresholds specified in project category #1 above.



16. Projects that reduce greenhouse gas emissions from the degradation of marine ecosystems or other water-based ecosystems. **Medium Green to Light Green**

- ✓ Marine and freshwater ecosystem protection can have biodiversity, carbon sequestration, and coastal resilience benefits.
- ✓ The issuer informs us that while projects do not typically focus only on conservation, projects under this category may include restoration and protection of mangroves, reforestation of seaweeds or kelp, and habitat protection programmes.





17. Projects that reduce CO₂e intensity in fisheries or aquaculture.

Medium Green to Light Green

- ✓ Reducing emissions in fisheries and aquaculture is important to decarbonize a sector that can provide a lower emissions protein source.
- ✓ According to the issuer, criteria in IFC's Guidelines for Blue Finance, such as requiring MSC or ASC certification or an enforced sustainable fishing quota, will be required for projects in this category. Please see the risks and impacts highlighted in the "Fisheries, aquaculture, and seafood value chain" project category in Table 4 below.
- ✓ The issuer informs us that for aquaculture, projects may include sourcing lower emissions feed and developing more efficient feed management systems.
- ✓ Under framework fossil fuel exclusions, fossil fuel-based vessels and equipment are ineligible.



18. Projects that reduce food losses or waste or promote lower-carbon diets.

Medium Green

- ✓ Reductions in food loss and waste can have substantial climate benefits by reducing the demand for food associated with emissions and land or marine resources needed for food production.
- ✓ According to the issuer, potentially eligible activities include food waste utilisation (circular economy systems), policy interventions resulting in reduced food waste, and investments in avoided food losses along the value chain (e.g., better-managed cold-chain infrastructure to reduce crop or food spoilage).
- ✓ Improved cold chain storage can help reduce food loss and waste from perishable products, avoiding unnecessary greenhouse gas emissions and decreasing pressure on land- and seascapes. IFC informs us that cold chain investments must be energy efficient, cannot use fossil fuels and must instead be electrified under the fossil fuel exclusion, and must use low global warming potential refrigerants. Food loss reductions must be documented to ensure benefits.
- ✓ Food sources vary widely in emissions intensity, making promoting lower carbon diets an important contribution to the climate transition. The issuer notes that these projects



will focus only on plant- or fish and seafood-based protein solutions per the livestock exclusion.

- ✓ According to the issuer, this category also includes promoting lower carbon aquaculture feed, such as non-soy alternatives without potential deforestation risks.



19. Projects that contribute to reduction of greenhouse gas **Light to Medium Green**

emissions through production of biomaterials and bioenergy from biomass.



- ✓ Promoting sustainable biomaterials will be an important aspect of moving away from fossil fuel feedstocks and emissions intensive materials.
- ✓ According to the issuer, eligible materials may include bioplastics from cereals by-products; production of asphalt from lignin; production of biomass products (e.g., paper) replacing plastics; and other biomass materials (e.g., wood-based products) replacing energy-intensive materials (e.g., concrete, steel). Wood and paper products would need to be sustainable forest management certified (e.g., FSC or PEFC).
- ✓ The issuer informs us energy used during the production of these materials must meet renewable energy thresholds described in project category #1 above, which is positive. We encourage the issuer to assess lifecycle emissions benefits where possible when selecting projects.
- ✓ Renewable energy is much needed in a 2050 perspective, but there are inherent risks associated with bioenergy. Due to resource constraints and potential biodiversity concerns, biomass-based electricity in particular is unlikely to represent a significantly scalable solution.
- ✓ The issuer informs us that all renewable energy projects including bioenergy have to be below 50 gCO₂e/kWh on an operational basis, but lifecycle emissions are calculated only in limited cases. While this threshold is positive, we encourage the issuer to consider lifecycle impacts.
- ✓ Biofuel feedstocks are also a concern from a lifecycle emissions perspective depending on aspects such as deforestation risks and transportation distances. The issuer informs us that feedstocks can include waste cooking oil, biomass produced on formerly degraded land, or residues from sustainable forest management (e.g., FSC or PEFC).



certified), which have lower emissions risks than food and feed crops. The issuer also notes that IFC Performance Standards ensure there is no deforestation or impacts on food security and it requires positive climate benefits from biomass related projects.

- ✓ According to IFC, biomass is a very minor fraction of climate business and even less in the green bond program.



20. Brownfield energy efficiency improvement in water supply systems through deployment of technologies or equipment that have low energy consumption, promotion of better auditing practices, or reduction of water losses. **Medium Green**

supply systems through deployment of technologies or equipment that have low energy consumption, promotion of better auditing practices, or reduction of water losses.

- ✓ Improving energy efficiency in water management is positive from a climate perspective.
- ✓ According to the issuer, there is a 20% minimum threshold for improvements compared to business-as-usual practices. Water systems running on fossil fuels are not eligible under the green bond framework. Applications are for urban residential users, avoiding links to heavy emitting industries.
- ✓ Whenever possible, we encourage the issuer to make efforts to reduce emissions associated with equipment sourcing and installation.



21. Lower-carbon greenfield and brownfield water supply projects that replace tanker use or local coping mechanisms with a piped utility water supply system. **Medium Green**

projects that replace tanker use or local coping mechanisms with a piped utility water supply system.

- ✓ Replacing tankers running on fossil fuels and local coping mechanisms such as boiling water using natural gas with piped utility systems can reduce climate emissions while creating social benefits.
- ✓ According to the issuer, water systems running on fossil fuels are not eligible under the green bond framework.
- ✓ Be aware of embodied emissions in water system materials and emissions and local pollution that can occur during construction processes.



22. Greenfield water supply projects meeting high energy efficiency standard or making use of demand management. **Light Green**

efficiency standard or making use of demand management.

- ✓ Improving water efficiency and demand management can reduce emissions, enhance resilience, and limit negative local environmental impacts from water overuse.
- ✓ According to the issuer, there is a 20% minimum threshold for improvements compared to business-as-usual practices. Water systems running on fossil fuels are ineligible under the green bond framework.



- ✓ Construction of water infrastructure may involve fossil fuel usage, while emissions embodied materials or water efficiency equipment may also be significant. Whenever possible, we encourage the issuer to make efforts to reduce lifecycle emissions associated with construction and materials.
- ✓ Other specific climate impacts and risks will depend on the types of end users supported, project design, and local conditions. The Light Green shading reflects the broad nature of the category. We encourage IFC to carefully screen and monitor projects with consideration for these aspects.



23. Greenfield and brownfield projects that promote improved operation and maintenance to reduce water losses, promote energy savings, or meet or exceed wastewater treatment targets.

Light Green

- ✓ Improving wastewater management and treatment are important from a climate perspective, both to reduce emissions, improve resiliency, and also reduce negative local environmental impacts, such as water pollution.
- ✓ According to the issuer, there is a 20% minimum threshold for improvements compared to business-as-usual practices. Water systems running on fossil fuels are ineligible under the green bond framework.
- ✓ Construction of water infrastructure may involve fossil fuel usage, while emissions embodied materials or water efficiency equipment may also be significant. Whenever possible, we encourage the issuer to make efforts to reduce lifecycle emissions associated with construction and materials.
- ✓ Other specific climate impacts and risks will depend on the types of end users supported, project design, and local conditions. The Light Green shading reflects the broad nature of the category. We encourage IFC to carefully screen and monitor projects with consideration for these aspects.



24. Greenfield projects that reduce methane or nitrous oxide emissions through wastewater, fecal sludge or septage collection and treatment.

Light to Medium Green

- ✓ Untreated wastewater and sewage have links to climate emissions and threatens water quality, making treatment and disposal systems important. Best practices include applying a circular economy approach to the water treatment process by using as much of waste streams as possible.
- ✓ Wastewater systems running on fossil fuels are ineligible under the green bond framework.
- ✓ Specific climate impacts and risks will depend on the types of end users supported, project design, energy sourcing, and local conditions. We encourage IFC to carefully screen and monitor projects with consideration for these aspects.
- ✓ Construction and upgrades of wastewater infrastructure may involve fossil fuel usage, while emissions embodied in building materials are also typically significant. Whenever possible, we encourage the issuer to make efforts to reduce emissions associated with materials.



25. Brownfield projects for wastewater that reduce emissions through energy efficiency improvements or improved treatment targets.

Light to Medium Green

- ✓ Improving wastewater management and treatment are important from a climate perspective, both to reduce emissions, improve resiliency, and also reduce negative local environmental impacts, such as water pollution. The interval of shades reflects the broad nature of the category.
- ✓ According to the issuer, there is a 20% minimum threshold for improvements compared to business-as-usual practices. Wastewater systems running on fossil fuels are ineligible under the green bond framework. Methane leakage risks must be managed according to best practices under the IFC Performance Standards.
- ✓ Specific climate impacts and risks will depend on the types of end users supported, project design, energy sourcing, and local conditions. We encourage IFC to carefully screen and monitor projects with consideration for these aspects.
- ✓ Construction and upgrades of wastewater infrastructure may involve fossil fuel usage, while emissions embodied in building materials are also typically significant.





Whenever possible, we encourage the issuer to make efforts to reduce emissions associated with materials.



26. Greenfield or brownfield projects that improve latrines or collection of wastewaters, fecal sludge, or septage. **Light to Medium Green**

- ✓ Improving wastewater collection, management, and treatment are important to reduce negative local environmental impacts, such as water pollution. The interval of shades reflects the broad nature of the category.
- ✓ According to the issuer, there is a 20% minimum threshold for improvements compared to business-as-usual practices. Wastewater systems running on fossil fuels are ineligible under the green bond framework. Methane leakage risks must be managed according to best practices under the IFC Performance Standards.
- ✓ Specific climate impacts and risks will depend on the types of end users supported, project design, energy sourcing, and local conditions. We encourage IFC to carefully screen and monitor projects with consideration for these aspects.
- ✓ Construction and upgrades of wastewater infrastructure may involve fossil fuel usage, while emissions embodied in building materials are also typically significant. Whenever possible, we encourage the issuer to make efforts to reduce emissions associated with materials.



27. Wastewater reuse.

Light to Medium Green

- ✓ Improving wastewater reuse is positive from a climate perspective, both to reduce emissions, improve resiliency, and also reduce negative local environmental impacts from water overuse. The interval of shades reflects the broad nature of the category.
- ✓ According to the issuer, there is a 20% minimum threshold for improvements compared to business-as-usual practices. Wastewater systems running on fossil fuels are ineligible under the green bond framework.
- ✓ Specific climate impacts and risks will depend on the types of end users supported, project design, energy sourcing, and local conditions. We encourage IFC to carefully screen and monitor projects with consideration for these aspects.





- ✓ Construction and upgrades of wastewater infrastructure may involve fossil fuel usage, while emissions embodied in building materials are also typically significant. Whenever possible, we encourage the issuer to make efforts to reduce emissions associated with materials



28. Separate collection and transport of source-segregated **Dark Green** waste fractions.

- ✓ Collection and transport of source-segregated waste fractions can improve material circularity by facilitating recycling solutions. Recycling can limit climate emissions by reducing upstream demand for raw material extraction as well as preventing downstream waste from going to directly to landfill or incineration. Waste management is also an important pollution prevention measure to avoid harm to human health and local ecosystems.
- ✓ According to the issuer, only electric, green hydrogen, or biofuel-powered collection and transport are eligible under this category; fossil fuel-based and hybrid vehicles are ineligible under framework exclusions.
- ✓ Be aware that recycling downstream from collection entails energy consumption, emissions, and discharges to the environment that require mitigation strategies. Local pollution elsewhere and fossil fuel-based energy in waste processing should be avoided, while circular solutions and recycling should be encouraged. Note that waste prevention should be prioritized in the waste management hierarchy. IFC's Performance Standards and other green bond framework selection criteria cover some of these aspects.



29. Temporary storage, bulking, or transfer of separately collected source-segregated waste fractions. **Dark Green**

- ✓ Storage, bulking, and transfer of source-segregated waste fractions can improve material circularity by facilitating recycling solutions. Recycling can limit climate emissions by reducing upstream demand for raw material extraction as well as preventing downstream waste from going to directly to landfill or incineration. Waste management is also an important pollution prevention measure to avoid harm to human health and local ecosystems.



- ✓ According to the issuer, only electric, green hydrogen, or biofuel-powered transport are eligible under this category; fossil fuel-based and hybrid vehicles are ineligible under framework exclusions.
- ✓ Be aware that recycling downstream from collection entails energy consumption, emissions, and discharges to the environment that require mitigation strategies. Local pollution elsewhere and fossil fuel-based energy in waste processing should be avoided, while circular solutions and recycling should be encouraged. Note that waste prevention should be prioritized in the waste management hierarchy. IFC's Performance Standards and other green bond framework selection criteria cover some of these aspects.



30. Repair and reconditioning of products or product components to enable their reuse.

Dark Green

- ✓ Preparation for reuse is the second priority in the waste management hierarchy after prevention. It can limit climate emissions by reducing upstream demand for raw material extraction as well as preventing downstream waste from going to directly to landfill or incineration.
- ✓ Be aware that repair and reconditioning can entail energy consumption, emissions, and discharges to the environment that require mitigation strategies. IFC's Performance Standards and other green bond framework selection criteria cover some of these aspects.
- ✓ No products or components can have links to the fossil fuel industry under framework exclusions.



31. Material recovery from separately collected waste involving mechanical processes.

Dark Green

- ✓ Material recovery for reuse or recycling supports the second and third priorities in the waste management hierarchy after prevention. Reuse and recycling can limit climate emissions by reducing upstream demand for raw material extraction as well as preventing downstream waste from going to directly to landfill or incineration. Waste management is also an important pollution prevention measure to avoid harm to human health and local ecosystems.
- ✓ Fossil fuel powered recovery systems are ineligible under framework exclusions.



- ✓ Be aware that recovery and recycling entails energy consumption, emissions, and discharges to the environment that require mitigation strategies. IFC's Performance Standards and other green bond framework selection criteria cover some of these aspects.



32. Material recovery from separately collected or pre-sorted waste involving processes other than mechanical processes.

Dark Green

- ✓ Material recovery for reuse or recycling supports the second and third priorities in the waste management hierarchy after prevention. Reuse and recycling can limit climate emissions by reducing upstream demand for raw material extraction as well as preventing downstream waste from going directly to landfill or incineration. Waste management is also an important pollution prevention measure to avoid harm to human health and local ecosystems.
- ✓ Fossil fuel powered recovery systems are ineligible under framework exclusions.
- ✓ Be aware that recovery and recycling entails energy consumption, emissions, and discharges to the environment that require mitigation strategies. IFC's Performance Standards and other green bond framework selection criteria cover some of these aspects.



33. Anaerobic digestion of separately collected bio-waste. **Medium Green**

- ✓ Anaerobic digestion of biowaste can allow for recovery and productive use of biogas. While this still has carbon dioxide emissions, it avoids more harmful methane emissions during waste decomposition.
- ✓ Livestock waste-related projects are ineligible under framework criteria.
- ✓ According to the issuer, methane leakage risks during collection and transport must be managed according to best practices under the IFC Performance Standards. Digestate cannot be incinerated and must instead be used for other purposes, such as backfilling or cover material.



34. Other types of recovery and valorization of bio-waste. **Light to Medium Green**

- ✓ Biowaste recovery can reduce emissions and improve waste management. The climate ambition of this project category could vary greatly depending on project design and context, leading to the shading interval.
- ✓ Livestock waste-related projects are ineligible under framework criteria.
- ✓ According to the issuer, deforestation and other harmful land use change must be avoided during biomaterial production and methane leakage risks must be managed according to best practices under the IFC Performance Standards.



35. Mechanical or biological treatment of mixed residual waste. **Light Green**

- ✓ Improved waste treatment and management can reduce climate emissions and local pollution. Be aware that waste disposal should be the last resort in a waste management hierarchy and prevention, reuse, recycling, and recovery should be prioritized in that order.
- ✓ The ambition of this project category could vary greatly depending on project design and context, leading to the Light Green shading.
- ✓ Waste incineration is excluded. Be aware that waste treatment can entail energy consumption, emissions, and discharges to the environment that require mitigation strategies. IFC's Performance Standards and other green bond framework selection criteria cover some of these aspects.
- ✓ According to the issuer, methane leakage risks must be managed according to best practices under the IFC Performance Standards.
- ✓ Fossil fuel powered waste treatment systems and livestock waste-related projects are ineligible under framework exclusions.



36. Landfill gas capture, abatement, or utilization as part of closing old landfills, landfill cells or dumpsites. **Light Green**

- ✓ Landfill gas recovery and productive use is positive from a climate perspective. While this still generates carbon dioxide emissions, it avoids more harmful unabated methane emissions during waste decomposition.



- ✓ According to the issuer, methane leakage risks during collection and transport must be managed according to best practices under the IFC Performance Standards.
- ✓ Landfill closures should ensure sufficient local pollution abatement and ecosystem restoration measures where applicable. IFC Performance Standards cover some of these aspects as well.



37. Landfill gas capture, abatement, or utilization in new sanitary landfills or landfill cells. **Light Green**

- ✓ Landfill gas recovery and productive use is positive from a climate perspective. While this still generates carbon dioxide emissions, it avoids more harmful unabated methane emissions during waste decomposition.
- ✓ According to the issuer, methane leakage risks during gas collection and transport must be managed according to best practices under the IFC Performance Standards.
- ✓ New landfills should ensure sufficient emissions and local pollution management and be designed to mitigate risks to biodiversity and ecosystems. Non-landfill alternatives should be considered where feasible. IFC Performance Standards cover some of these aspects as well.



38. Brownfield projects aimed at improving energy efficiency in waste management facilities.

Light to Medium Green

- ✓ Improving energy efficiency in waste management is positive from a climate perspective.
- ✓ According to the issuer, there is a 20% minimum threshold for improvements relative to business-as-usual practices. Waste management systems running on fossil fuels are ineligible under the green bond framework.
- ✓ Whenever possible, we encourage the issuer to make efforts to reduce emissions associated with material and equipment sourcing and installation.



39. Urban and rural public transport projects.

Dark Green to Medium Green

- ✓ Public transport powered by renewable energy sources is an important contribution to the climate transition. In rural contexts where renewable energy supporting infrastructure may be less well-developed, this is particularly ambitious.
- ✓ According to the issuer, only electric, green hydrogen, or biofuel-powered public transport projects are eligible under this category; fossil fuel-based and hybrid vehicles are ineligible under framework exclusions.
- ✓ Be aware of potential embodied emissions in materials for constructing public transport projects and emissions and local pollution associated with construction. Some of these aspects are covered in IFC's Performance Standards.
- ✓ Consider concerns regarding battery materials sourcing production for electric vehicles. Be aware of risks and impacts associated with bioenergy and hydrogen as detailed in project categories #1 and #2 above.



40. Non-motorized transport or schemes for sharing bicycles.

Dark Green

- ✓ Non-motorized transport and bicycle sharing is well-aligned with a low carbon future.
- ✓ Be aware of potential embodied emissions in materials for constructing bicycle lanes or pedestrian paths and emissions and local pollution associated with construction. Some of these aspects are covered in IFC's Performance Standards.
- ✓ IFC screens projects for climate risk and resilience aspects, which is positive for transport infrastructure.



41. Inter-urban railway projects for freight or passengers. **Dark Green**

- ✓ The issuer informs us that rail projects will be 100% electrified, which is well-aligned with a low carbon future. Transport of fossil fuels is excluded.
- ✓ Be aware of potential embodied emissions in materials for rail infrastructure and emissions, local pollution, and biodiversity impacts associated with construction. Some of these aspects are covered in IFC's Performance Standards.
- ✓ IFC screens projects for climate risk and resilience aspects, which is positive for transport infrastructure.



42. Bus or coach public passenger transport.

Dark Green to Medium Green

- ✓ Public transport powered by renewable energy sources is an important contribution to the climate transition.
- ✓ According to the issuer, only electric, green hydrogen, or biofuel-powered buses are eligible under this category; fossil fuel-based and hybrid buses are ineligible under framework exclusions.
- ✓ Consider concerns regarding battery materials sourcing production for electric buses. Be aware of risks and impacts associated with bioenergy and hydrogen as detailed in project categories #1 and #2 above. The land use-related bioenergy risks described account for the Medium Green inclusion.



43. Water transport projects for freight or passengers, or efficiency improvement.

Dark to Medium Green

- ✓ Water transport for freight and passengers powered by renewable energy sources is an important contribution to the climate transition.
- ✓ According to the issuer, only electric, green hydrogen, or biofuel-powered vessels are eligible under this category; fossil fuel-based and hybrid vessels are ineligible under framework exclusions. Efficiency improvements must be 20% compared to business as usual and follow the same exclusions of fossil fuel and hybrid vessels. Transport of fossil fuels is also excluded.
- ✓ Consider concerns regarding battery materials sourcing production for electric vessels. Be aware of risks and impacts associated with bioenergy and hydrogen as detailed in project categories #1 and #2 above. The land use-related bioenergy risks described account for the Medium Green inclusion.



44. Passenger or freight fleets or associated infrastructure **Dark to Medium Green**
with zero or low tailpipe emissions.

- ✓ Decarbonizing vehicle fleets is critical to achieve a low carbon future.
- ✓ According to the issuer, only electric, green hydrogen, or biofuel-powered vehicles are eligible under this category; fossil fuel-based and hybrid vehicles are ineligible under framework exclusions. Transport of fossil fuels is also excluded.
- ✓ Consider concerns regarding battery materials sourcing production for electric vehicles. Be aware of risks and impacts associated with bioenergy and hydrogen as detailed in project categories #1 and #2 above. The land use-related bioenergy risks described account for the Medium Green inclusion.



45. Use of waste gas as a transportation fuel.

Light to Medium Green

- ✓ Using waste gas can have climate benefits in transport where electrification is not possible.
- ✓ The issuer informs us that this category will focus on biogas. Methane from abandoned mines or existing coal mines, coalbed methane, and gas from greenfield oil or coal production are ineligible under fossil fuel exclusions.
- ✓ Biogas is a positive part of the circular economy, as it forms part of a closed loop in which waste, wastewater, forestry and industrial residues are used in renewable products such as fuel, electricity and heat, avoiding methane emissions into the atmosphere. Biogas is normally produced from organic waste that has few other uses: this is positive from a resource efficiency perspective.
- ✓ The production and use of biogas entails some emissions (including methane leakage) and pollutant discharges to the local environment that should be minimized.



46. Measures that reduce net energy consumption, resource consumption or CO₂e emissions, or increase plant-based carbon sinks in greenfield and brownfield buildings and associated grounds.

Light Green

- ✓ Reducing energy/resource consumption or emissions or increasing carbon sinks are positive steps. According to the issuer, eligible projects must achieve at least a 20% improvement compared to business-as-usual practices. The climate ambition of to



achieve this threshold in practice will vary greatly depending on project design and context, leading to a Light Green shading.

- ✓ Be aware that there are no restrictions on what kinds of buildings could be eligible for improvements, creating potential links to heavy emitting industries (e.g., airports).
- ✓ IFC screens projects for climate risk and resilience aspects, which is positive for buildings.



47. Measures that reduce net energy consumption, resource consumption or CO₂e emissions, or measures that increase plant-based carbon sinks in new or retrofitted buildings and associated grounds, enabling certification under standards such as Excellence in Design for Greater Efficiencies, Building Research Establishment Environmental Assessment Method, certificate issued by the German Sustainable Building Council, Haute Qualité Environnementale, Green Star, or the Leadership in Energy and Environmental Design.

Light Green

- ✓ Reducing energy/resource consumption or emissions or increasing carbon sinks to achieve green building sustainability certification are positive steps.
- ✓ At the same time, certifications' point-based structure does not guarantee low climate impact buildings. IFC does not require specific certification levels (e.g., "Excellent", "Outstanding" etc.).
- ✓ The climate ambition of this category will therefore vary greatly depending on project design and context, leading to a Light Green shading.
- ✓ Be aware that there are no restrictions on what kinds of buildings could be eligible for improvements, creating potential links to heavy emitting industries (e.g., airports).
- ✓ IFC screens projects for climate risk and resilience aspects, which is positive for buildings.



48. Measures that reduce net energy consumption, resource consumption or CO₂e emissions, or increase plant-based carbon sinks in public areas or installations.

Light Green

- ✓ Reducing energy/resource consumption or emissions or increasing carbon sinks are positive steps. According to the issuer, eligible projects must achieve at least a 20% improvement compared to business-as-usual practices. The climate ambition of to achieve this threshold in practice will vary greatly depending on project design and context, leading to a Light Green shading.
- ✓ Be aware that there are no restrictions on what kinds of public areas or installations could be eligible for improvements, creating potential links to heavy emitting industries (e.g., fossil fuel-based transportation hubs).



- ✓ IFC screens projects for climate risk and resilience aspects, which is positive for public areas and infrastructure.



49. Brownfield stand-alone end-use energy efficiency improvement or CO₂e-emission reduction in existing appliances or equipment.

Light Green

- ✓ Energy efficiency improvements and emissions reductions in existing appliances and equipment are positive contributions to the low carbon future.
- ✓ According to the issuer, eligible projects must achieve at least a 20% improvement compared to business-as-usual practices. The climate ambition of to achieve this threshold in practice will vary greatly depending on project design and context, leading to a Light Green shading.
- ✓ Fossil fuel powered appliances or equipment are excluded under the framework. Be aware of appliance and equipment materials sourcing and embodied emissions as well as end of life risks and rebound effects.
- ✓ IFC's framework exclusions apply but be aware that end users of this equipment are not specified and could include heavy emitting industries.



50. New or replacement stand-alone energy efficient appliances or equipment.

Light Green

- ✓ Energy efficiency improvements and emissions reductions in new or replacement appliances and equipment are positive contributions to the low carbon future.
- ✓ According to the issuer, eligible projects must achieve at least a 20% improvement compared to business-as-usual practices. The climate ambition of to achieve this threshold in practice will vary greatly depending on project design and context, leading to a Light Green shading.
- ✓ Fossil fuel powered appliances or equipment are excluded under the framework. Be aware of appliance and equipment materials sourcing and embodied emissions as well as end of life risks and rebound effects.
- ✓ IFC's framework exclusions apply but be aware that end users of this equipment are not specified and could include heavy emitting industries.



51. Energy efficiency improvement, renewable energy deployment, or CO₂e-emission reduction in existing data centers.

Light Green

- ✓ Digital solutions are expected to be an important enabling technology for climate mitigation and adaptation strategies. However, we note there are trade-offs in emissions and energy use from the increasing demand for data centres while reducing emissions in other sectors. The extent of material climate benefits from digitalisation and expanding networks is still disputed.
- ✓ Energy efficiency improvements and emissions reductions measures at data centres are positive. According to the issuer, eligible projects must achieve at least a 20% improvement compared to business-as-usual practices. The climate ambition of to achieve this threshold in practice will vary greatly depending on project design and context, leading to a Light Green shading.
- ✓ We encourage IFC to consider using more specific measures such as power usage effectiveness (PUE) to define ambition thresholds for data centres in future frameworks.
- ✓ Renewable energy deployment at data centres could be a Dark Green solution. See project category #1 above for related considerations.
- ✓ Where possible, we encourage IFC to work with project partners that exclude cryptocurrency mining from their data centres given their high energy consumption.



52. Greenfield data centers that meet best international practices for energy efficiency or that are supplied largely by on-site renewable energy generation.

Light Green to Medium Green

- ✓ While data centre efficiency measures are positive, it is unclear what “best international practices for energy efficiency” entail. The climate ambition of this project category could vary greatly depending on project design and context, leading to the Light Green shading. We encourage IFC to use more specific measures such as power usage effectiveness (PUE) to define ambition thresholds for data centres in future frameworks.
- ✓ Renewable energy deployment at data centres could be a Dark Green solution. See project category #1 above for related considerations.



- ✓ Be aware of embodied emissions in building materials and equipment as well as local pollution and biodiversity impacts during construction.
- ✓ Where possible, we encourage IFC to work with project partners that exclude cryptocurrency mining from their data centres given their high energy consumption.



53. Telecommunications networks with energy efficiency **Light to Medium Green** levels that meet best international practices.



- ✓ Digital solutions could be an important enabling technology for climate mitigation and adaptation strategies, increasing the need for energy-efficient telecommunications and connectivity.
- ✓ According to the issuer, projects in this category would include telecommunication towers in rural areas powered by renewable energy with battery storage. Some backup diesel generators with associated fossil fuel use and emissions may be used in emergency situations.
- ✓ Be aware this category could include both greenfield and brownfield investments (i.e., both construction of new and improvements of existing towers). Consider embodied emissions and sourcing practices for tower, equipment, and battery materials as well as battery end of life.



54. Research or development of renewable energy, energy efficiency improvement, low-carbon technologies, or other technologies instrumental to achieving full decarbonization. **Medium Green**

- ✓ Investment in research and development to advance decarbonization is critical.
- ✓ According to the issuer, framework criteria and exclusions apply to R&D activities. The ultimate shading of these investments will depend on the shading that can be assigned to final applications, which could include Dark Green, Medium Green, or Light Green activities.



55. An activity that enables a reduction in energy or material use across a supply chain (upstream or downstream) through energy efficiency or resource-use efficiency improvements in the existing supply chain, through a shift to a less carbon-intensive supply chain, or by implementing circular economy systems. **Light Green**

- ✓ Value chain emissions management is an important aspect of decarbonization.
- ✓ According to the issuer, eligible projects must achieve at least a 20% improvement compared to business-as-usual practices. Given the potential breadth of solutions that could be included under this project category, the climate ambition could vary greatly depending on project design and context, leading to a Light Green shading.





56. Programs or systems that provide incentives or tools to units or teams within entities to manage and minimize GHG emissions and contribute to the entity’s decarbonization goals.

Light Green

- ✓ Improved organizational management of climate emissions is critical to achieve the low carbon transition.
- ✓ Note that eligible incentives and tools support individual entities’ decarbonization goals, which may not be ambitious and are not guaranteed to be aligned with the Paris Agreement.
- ✓ IFC’s framework exclusions apply but be aware that end users of these tools and incentives are not specified and could include heavy emitting industries. Consider lock-in and rebound risks in emissions-intensive supply chains.

Table 1. Eligible climate mitigation project categories

Climate Adaptation Categories



Category	Eligible project types	Green Shading and considerations
<p>Climate Change Adaptation</p>  	<p>To identify activities and assets that contribute to climate change adaptation, IFC applies the Joint MDB Methodology for Tracking Climate Change Adaptation Finance. The Methodology, developed jointly by multilateral development banks in 2012 and updated in 2022, identifies adaptation activities that contribute to climate change adaptation. The three types of activities are:</p> <ul style="list-style-type: none"> • Activities that integrate measures to manage physical climate risks and ensure that the project’s intended objectives are realized despite these risks, 	<p>Dark to Medium Green</p> <ul style="list-style-type: none"> ✓ Climate scientists have been clear that some level of climate change is taking place even in the most optimistic scenarios. It is therefore crucial to plan and mitigate potential risks to reduce the potential financial and environmental impact of such events. Implementing adaptation solutions can also reduce resources and emissions linked to rebuilding damaged assets. ✓ In an update from the previous framework, the issuer informs us that it has increased the stringency of how it selects adaptation projects. Examples such as flood defences for coastal roads or desalination facilities with fossil fuel-based energy mentioned in our previous assessment would no longer be eligible. Where possible, IFC will prioritize projects with both mitigation and adaptation benefits, such as replacing hydropower with solar energy in water stressed areas.



- Activities that directly reduce physical climate risk and build the adaptive capacity of the system within which the activity takes place, and
 - Activities that contribute to reducing the underlying causes of vulnerability to climate change at the systemic level and/or removing knowledge, capacity, technological and other barriers to adaptation
- ✓ While many adaptation solutions may be Dark Green, the broad nature of this category may allow for some Medium Green elements.
 - ✓ According to the issuer, only incremental costs facilitating adaptation objectives are eligible under this category of the framework, not the entire cost of projects with adaptation elements.
 - ✓ Be aware that overall projects may nevertheless require increased energy and materials with embodied emissions, such as large infrastructure projects. We encourage the issuer to assess lifecycle climate impacts of projects where possible. According to IFC, lowest emissions solutions are considered.
 - ✓ Construction projects to support adaptation can also have local environmental and biodiversity impacts that require management. IFC’s Performance Standards will mitigate some of these risks.
 - ✓ Fossil fuel-based projects are ineligible as per the exclusion criteria. Climate adaptation projects for the oil & gas industry, fossil fuel generation or intensive industries and mining are excluded according to the issuer.

Table 2. Eligible adaptation project categories

Biodiversity Protection Categories

Category	Eligible project types	Green Shading and considerations
Productive Land Use/Agriculture  	1. Climate-smart agriculture <ul style="list-style-type: none"> a. Rehabilitation of degraded lands with native and/or naturalized species. b. Reduction in synthetic fertilizer use by at least 20% on project implementation to reduce downstream eutrophication, and to promote use of biofertilizer and other organic solutions (for example, composting). 	Medium to Light Green <ul style="list-style-type: none"> ✓ The issuer informs us that livestock-related projects, including livestock waste management, are ineligible under green bond framework exclusions. Activities introducing or replacing new fossil fuel-based technologies such as agricultural machinery or irrigation systems are ineligible under framework exclusions.



- c. Reduction in pesticide use by at least 20% on project implementation and promotion of biosolutions.
 - d. Switching from monocropping to diversified cropping systems, including intercropping and use of cover crops to improve resilience and soil quality.
 - e. Significant reduction of tillage or implementation of no-till practices.
 - f. Cultivation of native or naturalized species that can more readily adapt to variations in production cycles, water quality/quantity, and temperatures.
 - g. Infrastructure that uses natural or combined green/gray solutions that prevent runoff of agrochemicals and sediment into rivers or coastal basins.
 - h. The use of sustainable agricultural practices/varieties/technology and/or infrastructure that increases crop yields/quality on existing land without increasing the environmental footprint.
 - i. Design, implementation, use, or improvement of traceability mechanisms, data, and technologies used to prevent deforestation and monitor biodiversity benefits at the corporate level or along the supply chain.
 - j. Efficient irrigation – promote efficient water allocation, water recycling, sustainable reuse of graywater, rainwater harvesting, and utilization of native species that have low water consumption. This is conditional to avoid depletion of natural water resources.
 - k. Climate adaptation and resilience measures that also conserve and/ or restore ecosystems (for example, drought-resistant seeds, nutrient cycling, water storage, ecotone levees, floodplain restoration, water storage
- ✓ In the assessment of projects, IFC applies its Performance Standards to avoid deforestation and other negative environmental and social impacts. According to the issuer, only environmentally positive land use change, such as from degraded to productive land, is eligible. Where possible, IFC seeks to undertake projects with potential deforestation leakage risks in areas pursuing jurisdictional approaches.
 - ✓ Climate-smart agriculture is a promising approach for tackling both climate mitigation and adaption in global food production systems. However, it is a broad term which can easily be misrepresented and may or may not have material impacts depending on the approach and context.
 - ✓ IFC informed us that at least 20% improvement in water, N₂O fertilizer emissions, or reduction of food losses relative to business-as-usual are required.
 - ✓ While construction of infrastructure to prevent pollution is positive, it may involve fossil fuel usage or embodied emissions in building materials. Whenever possible, we encourage the issuer to use green rather than grey solutions and make efforts to reduce construction emissions.
 - ✓ Diversified cropping systems, mitigating water consumption and ecosystem conservation or restoration can be important climate resiliency strategies.
 - ✓ While its principles such as building soil organic matter are positive, regenerative agriculture is a similarly broad term that can be misrepresented and have varying impacts depending on project design and context.



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- with watershed restoration or conservation – all projects that make agribusiness more resilient to threats like flooding and drought).
1. Conservation and production of native or naturalized seed varieties, especially endemic species.
 - m. Adoption of practices and/or technologies in supply chain management to promote zero deforestation or other positive effects on biodiversity.
 2. Regenerative agriculture: Farming and grazing practices that, among other benefits, rebuild soil organic matter, restore degraded soil biodiversity, enhance and maintain ecosystem function, and preserve native seed and livestock varieties; sustainable fiber production and other activities that focus on recuperation of the ecosystem through improved land management and that operate throughout the supply chain.
 3. Production and trade of certified crops/commodities in line with robust sustainability certifications which follow audit protocols that confirm biodiversity and potential climate benefits.
 4. Alternative production practices, or products such as sustainable hydroponics and alternatives to beef, to reduce pressure on land and prevent land conversion. This includes agricultural practices that contribute to the protection of wildlife, especially endangered and threatened species (wildlife-friendly options), and businesses that promote wildlife-friendly practices to improve land management, establish corridors for wildlife movement, and reduce demand for bushmeat.
 5. Adoption of innovation and technologies that improve land-use and agricultural practices, such as geospatial data tools and tools to detect soil degradation.
- ✓ We encourage IFC to carefully screen and review projects for outcomes such as improved soil carbon sequestration. The issuer confirms scientific monitoring and evidence will be required.
 - ✓ Sustainability certifications for agricultural commodities cover many important environmental topics and can verify improved on-farm practices. At the same time, certification systems vary significantly in stringency, can contain loopholes and pitfalls, and in many cases cannot adequately address larger systemic issues such as direct and indirect land use change driven by agricultural expansion and associated climate emissions.
 - ✓ The issuer informs us that sustainability certifications are reviewed regularly by IFC for eligibility under the green bond framework. Current eligible examples include the Roundtable on Responsible Soy, Fairtrade Small-Scale Producer, Rainforest Alliance, and Bonsucro certifications. Other certifications may be used with additional safeguards.
 - ✓ Beef is among the most emissions-intensive protein sources, making projects to promote alternatives beneficial from a climate perspective. The issuer notes that these projects will focus only on plant-based protein solutions per the livestock exclusion.
 - ✓ According to the issuer, hydroponics solutions must ensure water efficiency and avoid local pollution beyond business-as-usual measures to be eligible. Be aware of plastic waste and energy use, though fossil-fuel based systems are ineligible under framework exclusions.
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- ✓ Wildlife corridors and other biodiversity-friendly practices are positive features in agricultural landscapes.
- ✓ Use of technology to support sustainable agriculture is positive. We encourage IFC to ensure any tools are not used to expand agriculture into natural areas.

Freshwater/Marine Sustainable Production



1. Measures that achieve conservation, greater efficiency, and sustainable water use, including at least 20% reduction in water use in:
 - a. Agricultural production
 - b. Manufacturing and processing
 - c. Construction and building
 - d. Infrastructure development
2. Development and manufacturing of water conservation products (for example, low-flow shower heads, faucet aerators, water recyclers, and low-flow toilets) for residential and commercial use.
3. Measures that reduce the level of contamination in wetlands or other freshwater bodies.
4. Biodiversity-friendly fishing:
 - a. Repopulation of native species in rivers and other water bodies.
 - b. Production, trade, or retail of seafood products meeting or exceeding best practice certification standards.
5. Sustainable aquaculture production: Aquaculture with a certification that confirms that the investment does not undermine the function and resilience of ecosystems, such as mangroves, salt marshes, seagrasses, and critical habitats.

Light Green

- ✓ Be aware that this category includes a broad range of activities with diverse climate and environmental risks, leading to the Light Green shading. Other specific impacts or benefits will depend on the types of end users supported, project design, and local conditions. We encourage IFC to carefully screen and monitor projects with consideration for these aspects.
- ✓ Improving water system efficiency can reduce emissions, enhance resilience, and limit negative local environmental impacts from water overuse. According to the issuer, at least 20% efficiency improvements compared to business-as-usual practices are required and water systems running on fossil fuels are not eligible under the green bond framework.
- ✓ Construction and upgrades of water infrastructure may involve fossil fuel usage, while emissions embodied in building materials or water efficiency equipment may also be significant. Whenever possible, we encourage the issuer to consider lifecycle impacts and make efforts to reduce emissions associated with construction and materials.
- ✓ Water conservation products for residential and commercial use are positive. The issuer informs us a 20% minimum efficiency



6. Regenerative (restorative) aquaculture production: Bivalves and seaweed to increase food production and restore ocean health.
7. Sustainable fisheries and fishery practices: Operations compliant with gear restrictions/modifications, offtake and sourcing procedures, and vessel modifications, and consistent with best practice for preventing fishery degradation (for example, reducing by-catch).
8. Adoption of practices and/or technologies in supply chain management (including cold storage, fish processing facilities, and shipping) to reduce loss, expand access to markets, and reduce transport time.
9. Biodiversity-friendly shipping and cruising
 - a. Installation of ballast water treatment on ships to prevent contamination with invasive species.
 - b. Installation of membrane bioreactor-type water treatment for all blackwater and greywater on ships.
 - c. Installation of bilge water treatment on ships.
 - d. Installation of technology on ships to reduce noise pollution harmful to ocean species.
 - e. Solid waste reception and processing facilities at ports and terminals.
 - f. Deployment of technology-based mapping and analysis tools and/or alternative routing practices to protect biodiversity (for example, avoiding collision with large mammals).
10. Manufacturing or retail of ocean- and water-friendly household products (for example, biodegradable and phosphate-free products such as detergent, shampoos, soaps, deodorants, cleaners; microbead-free toothpaste; non-plastic packaging).

improvement must be achieved compared to business-as-usual alternatives. Be aware of embodied emissions in product materials as well as energy use during manufacturing and operation.

- ✓ Reducing contamination in wetlands or freshwater bodies is an important local pollution control measure. What these measures may entail is unclear. We encourage the issuer to ensure proper waste disposal and limit potential fossil fuel emissions from any vessels used during treatment. Some of these aspects are covered by IFC's Performance Standards.
- ✓ Sustainable fishing and aquaculture have the potential to produce sources of protein with a lower carbon and environmental footprint than meat. This will be crucial as the global population grows and consumption patterns become more resource intensive.
- ✓ However, fishing practices based on over-exploitation and using a fossil fuel-based fleet of vessels as well as plastic pollution from fishing equipment are serious concerns. For aquaculture, risks include the use of unsustainable or deforestation-causing (soy) feed in aquaculture feed, energy and water use, local pollution, and harm to native fish species and ecosystems.
- ✓ Certification schemes and "sustainable practices" can go some way towards allaying those concerns but have been criticized for lack of stringency and loopholes.
- ✓ According to the issuer, these risks will be addressed in project screening and selection. Safeguards include ensuring sustainable fishing quotas are monitored and enforced,



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11. Reduction of downstream eutrophication through the replacement of phosphate- or nitrogen-based synthetic fertilizers with non-synthetic organic fertilizers (linked also to improved agricultural practices).
 12. Prevention of stormwater and wastewater runoff into waterways, including investing in nature-based solutions for wastewater treatment, such as constructed wetlands to support removal of organic pollutants from wastewater.
 13. Upgrading wastewater treatment plants (agricultural, industrial, commercial, residential, or city level) to eliminate all pollutants harmful to biodiversity.
 14. Improving upstream watershed activities (linked to improved land management, agricultural practices, and sanitation) to reduce sediment flow and contamination.
- ✓ prioritizing aquaculture projects using worm and insect feed while screening out unsustainable soy and fish meal feed, and ensuring aquaculture projects do not harm ecosystems such as mangroves or native fish.
 - ✓ The issuer informs us the trade and retail of seafood products will not be eligible under IFC's green bond framework.
 - ✓ Improved cold chain storage can help reduce food loss and waste from perishable products such as fish and seafood, avoiding unnecessary greenhouse gas emissions and decreasing pressure on fisheries and other resources.
 - ✓ According to the issuer, cold chain investments must be energy efficient, cannot use fossil fuels and must instead be electrified under the fossil fuel exclusion, and must use low global warming potential refrigerants. Food loss reductions must be documented, and fishing levels must be monitored to ensure sustainability beyond legal quotas. Only fish for human consumption is eligible.
 - ✓ Be aware of significant emissions from the shipping and cruising sector, which still relies heavily on fossil fuels, and associated potential lock-in risks. The issuer informs us it seeks to avoid potentially extending the life of fossil fuel-based shipping assets with its green bond investments.
 - ✓ Ballast water treatment, black and grey water treatment, bilge water treatment, noise pollution mitigation, and solid waste management are important pollution prevention measures to avoid harm to human health and local ecosystems.
 - ✓ We encourage the issuer to ensure proper disposal of all wastes generated from pollution prevention activities, such as sewage
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sludge or solid waste. Local pollution elsewhere and fossil fuel-based energy in waste processing should be avoided, while circular solutions and recycling should be encouraged. IFC's Performance Standards and other green bond framework selection criteria cover some of these aspects.

- ✓ Biodiversity protection through rerouting vessels is positive from a conservation perspective. Be aware of potential additional fossil fuel burn and associated emissions if routes must be lengthened.

 - ✓ According to the issuer, all products will need to provide evidence of sufficient climate and environmental performance and potentially achieve applicable certifications to be eligible.
 - ✓ We encourage IFC to monitor all projects in this category to ensure they are leading to product substitution and associated positive environmental outcomes (rather than reflecting market growth generally without displacing more harmful alternatives).
 - ✓ Reducing nitrogen and phosphorous pollution through improved materials and products can prevent eutrophication, hypoxic "dead zones," and associated harm to aquatic biodiversity and ecosystems as well as human health and livelihoods.
 - ✓ Avoiding plastic packaging and microbeads also prevents harm to wildlife and environmental quality due to plastic pollution while reducing links to fossil fuel feedstocks.

 - ✓ Some substitutes for synthetic fertilizers may have lifecycle emissions benefits, but this depends on feedstock, methane
-



management, and transportation distance. Animal waste is ineligible under the livestock exclusion.

- ✓ We encourage the issuer to ensure that these alternatives are applied using “right time, right place, right amount” best practices to avoid unnecessary emissions and local pollution.
- ✓ Improving wastewater management and treatment are important from a climate perspective, both to reduce emissions, improve resiliency, and also reduce negative local environmental impacts, such as water pollution. Nature-based solutions are likely to be particularly positive.
- ✓ Construction and upgrades of wastewater infrastructure may involve fossil fuel usage, while emissions embodied in building materials are also typically significant. Whenever possible, we encourage the issuer to make efforts to reduce emissions associated with materials.
- ✓ Improving upstream watershed activities to reduce sediment flow and contamination is positive, but the broad nature of this criterion makes careful project screening and selection essential to avoid climate and environmental risks and impacts.

Waste and Plastic Management



1. Manufacturing, trade finance, or retail of compostable and biodegradable products, including plant-based plastics and packaging solutions that displace traditional products that impact marine, freshwater, and terrestrial biodiversity.
2. Manufacturing, trade finance, or retail of low-carbon and biodegradable materials (for example, Lyocell) as an alternative to cotton and fossil-based fibers.
3. Urban drainage systems that prevent plastic, solid waste, and pollutants runoff into freshwater and marine habitats.

Medium to Light Green

- ✓ Substituting alternative compostable and biodegradable materials for plastic and fossil-based fibres is positive from a pollution prevention perspective and in avoiding links to fossil fuel feedstocks. Conventional cotton production is associated with significant pesticide use, making alternatives with more sustainable practices positive.



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4. Flood mitigation measures that prevent plastic, solid waste, or pollutants runoff.
 5. Reduction of plastic use in product design and manufacture, and use of recycled plastics for residual material needs.
 6. Support for research and innovative technology aimed at recycling single-use plastic as part of larger-scale plastic recycling efforts.
 7. Plastic recycling activities and facilities.
 8. Reuse or sustainable repurposing of plastics.
- ✓ According to the issuer, trade and retail aspects of this category will only be eligible for the highest environmentally performing products, but no specific thresholds are defined.
 - ✓ We encourage IFC to monitor all projects in this category to ensure they are leading to product substitution and associated positive environmental outcomes (rather than reflecting market growth generally without displacing more harmful alternatives).
 - ✓ We further encourage IFC to ensure materials are sourced sustainably, with particular attention to avoiding links to direct or indirect deforestation and associated emissions from organic feedstocks. IFC's Performance Standards address some of these concerns; lifecycle emissions analyses could strengthen screening processes further.
 - ✓ Urban drainage systems and flood mitigation measures that prevent chemical runoff and plastic or other solid waste pollution from reaching freshwater and marine habitats are positive steps to avoid harm to human health, biodiversity, and ecosystems.
 - ✓ Be aware of emissions from the energy and materials needed to construct this infrastructure and potential local pollution and biodiversity impacts associated with construction. We also encourage the issuer to ensure proper disposal of all wastes collected from these activities. Local pollution elsewhere and fossil fuel-based energy in waste processing should be avoided, while circular solutions and recycling should be encouraged. IFC's Performance Standards and other green bond framework selection criteria cover some of these aspects.
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Forestry and Plantations



1. Reforestation with native or naturalized species resulting in biodiversity benefits and ecosystem services (for example, carbon sequestration, water quality, water supply in areas of critical ecological flow).
2. Afforestation (plantations) or natural forest regeneration on degraded lands with native or naturalized species, to create production buffer zones or biodiversity corridors, especially when adjacent to or connecting virgin forest or protected areas.
3. Native non-timber forest products contributing to forest conservation, soil retention and recovery, and alternative livelihoods
4. Sustainable forest management: Forest production and management that meets international best practices and internationally accepted quality certification standards to ensure ecological, economic, and social benefits.

- ✓ Plastic reductions and circular solutions involving improved plastic reuse and recycling are an important part of the low carbon future. By reducing upstream demand for raw material extraction as well as preventing downstream waste from going into ecosystems, landfills, or incineration facilities, these solutions have the potential to limit climate emissions, local pollution, and harmful human health and biodiversity impacts.
- ✓ At the same time, be aware that recycling entails energy consumption, emissions, and discharges to the environment that require mitigation strategies.
- ✓ Be aware that plastics are derived from fossil fuel feedstocks. Even if plastics are recycled, they typically require additions of new plastic materials during processing, maintaining links to fossil fuels.

Light to Medium Green

- ✓ Reforestation is positive from a climate perspective and may be positive from a biodiversity perspective but only if done using mixed tree types, native species and other measures which encourage animal and plant life.
- ✓ Afforestation with plantations could come with associated environmental risks, such as reduced benefits to biodiversity and lower climate resilience. However, according to the issuer, these issues are heavily addressed by IFC's Sustainability Framework and Performance Standards.
- ✓ We encourage IFC to ensure non-timber forest products are harvested in an environmentally and socially sustainable manner.



5. Sustainable tree-crop production that incorporates native or naturalized species and does not cause or result in deforestation or loss of natural forests or any other biodiversity hotspot that has high conservation value or high carbon stock ecosystems.
6. Agroforestry systems linked to sustainable agricultural practices. Mixed tree and crop production, using native or naturalized species, appropriate for local climate conditions

- ✓ Sustainability certifications for forest management such as FSC and PEFC cover many important environmental topics and can verify improved on-site practices. At the same time, certification systems vary significantly in stringency from country to country, can contain loopholes and pitfalls, and in many cases cannot adequately address larger systemic issues. We encourage the issuer to clarify what it considers “international best practices.”
- ✓ Tree crop production and agroforestry systems can have both climate and biodiversity benefits if undertaken sustainably. We encourage the issuer to ensure its Performance Standards and other safeguards prevent deforestation or other ecosystem conversion or degradation potentially associated with these activities.

Tourism/Ecotourism Services



1. Sustainable or ecotourism ventures that meet established standards for best practices, conserve or restore habitats or avoid increasing encroachment on habitat, and work to reduce carbon emissions.
2. Tourism concessions and operations inside marine and terrestrial conservation areas that create opportunities or incentives for enhanced biodiversity protection or reduced biodiversity threat. These opportunities could be economic (for example, alternative livelihoods), social (for example, supporting changing norms or behaviors through education/best practice), or fiscal (for example, profit-sharing user fees with conservation areas). Tourism operations must meet recognized ecotourism standards.
3. Ecotourism ventures and operations outside conservation areas that are consistent with ecotourism principles. For example, these

Light Green

- ✓ This shading assumes only biodiversity conservation-specific expenditures that directly support nature and ecosystems are eligible. According to the issuer, proceeds can only be used in tourism services or activities that meet this requirement.
- ✓ “Recognized ecotourism standards” and “ecotourism principles” are not defined. We strongly encourage tourism projects that are climate resilient and avoid significant emissions, local pollution, and biodiversity impacts. IFC’s Performance Standards and other selection procedures manage some of these risks.
- ✓ Be aware that developments of new eco-tourism projects could catalyse additional environmental impacts from development of



ventures could be located in buffer zones of protected areas, in critical habitats, or in other sensitive sites, or where there is strong community participation or ownership.

supporting infrastructure and emissions from additional air travel.

Other Investments



1. Research and development and technology that helps to identify, monitor, report on, and verify biodiversity and business impacts. Examples include geographic information systems for biodiversity protection and artificial intelligence tools and software to track wildlife and monitor displacements in areas where poaching may occur.
2. Retrofitting existing infrastructure and construction projects to address adverse impacts on biodiversity previously caused or exacerbated by the project.
3. Innovations in aviation, trucking, and logistics to avoid transporting invasive species.

Medium Green

- ✓ Technology solutions to directly facilitate biodiversity conservation are well-aligned with a 2050 future.
- ✓ Retrofits to address biodiversity impacts are positive; be aware of embodied emissions in materials and emissions associated with energy used during construction.
- ✓ While measures to avoid transporting invasive species are important, consider the climate emissions associated with aviation, trucking, and logistics.

Conservation Land Use/Terrestrial Habitat Conservation



1. Conservation of key biodiversity areas through the establishment of legally recognized protected areas.
2. Conservation or restoration to create biodiversity credits for meeting mitigation requirements (for example, mitigation banking). (Note: These could be linked to conservation easements set up to provide offsets via protection/management/restoration.)
3. Conservation easements/servitudes/right of ways: Conservation easements earmark land for biodiversity conservation on private land while allowing owners to retain certain private property rights (some of these may be directly related to biodiversity credits/mitigation banking).

Dark to Medium Green

- ✓ Conservation of biodiversity, natural ecosystems, and habitats are important environmental objectives in their own right and can have substantial co-benefits for climate mitigation and adaptation due to critical ecosystem services including carbon sequestration, local climate regulation, soil stabilization, storm surge protection, etc. Establishing legally recognized protected areas and biodiversity corridors as well as oversight of private conservation areas are particularly positive measures.
- ✓ This category includes Medium Green shading due to the inclusion of developing biodiversity credits and mitigation banking systems. These concepts, while potentially positive for nature on balance, have some pitfalls in that they can allow for harm to biodiversity in one location in exchange for



4. Payments for ecosystem services or investments in mechanisms and conservation trust funds that support payment for ecosystem services directly linked to nature and biodiversity conservation.
5. A public-private partnership mechanism that rewards/reduces tax paid by private landowners to implement new, privately managed protected areas adjacent to existing protected areas; investments in oversight and verification mechanisms to ensure correct use
6. Rewilding through creating and restoring habitats for wildlife, including developing biodiversity corridors.
7. Fire management/fire risk reduction programs that finance management and interventions that directly reduce fire threats and have demonstrated a benefit to biodiversity.
8. REDD+ ventures that reduce emissions and produce carbon credits (post-Paris Agreement framework) and that generate sustained economic opportunities and social benefits for local communities.

conservation measures in another. If not carefully designed and monitored, these measures are not guaranteed to create net conservation benefits. Furthermore, the habitat destruction that is permitted under these systems and “offset” elsewhere can create cascading local effects given the spatially explicit nature of landscapes and ecosystems. According to the issuer, these markets are in an early stage of development and IFC would only engage in them with strict measurement and verification measures that ensure overall species conservation or recovery.

- ✓ We encourage IFC to ensure the permanence of protected areas or conservation practices on private land where feasible. Without careful design, these efforts may only delay ecosystem conversion or degradation.
- ✓ Be aware that some private partners involved in easements, payments for ecosystem services programs, or public-private partnership may be involved in fossil fuel-based or deforestation-linked activities elsewhere in their operations.
- ✓ While REDD+ ventures that produce carbon credits are mentioned in the framework, the issuer informs us that they are excluded from eligibility.

Freshwater and Marine Habitat Conservation



1. Wetland conservation/restoration to provide and sustain ecosystem services. Conservation and creation of wetlands to create biodiversity credits that establish wetland mitigation banks.
2. Conservation/restoration of marine areas (such as seagrass beds, coral, and mangroves) that protect important species, improve habitats, and provide services or important ecological functions. In some cases, these interventions can be designed to deliver carbon and biodiversity credits (marine habitat bank).

Dark to Medium Green

- ✓ Conservation of freshwater and marine ecosystems are important objectives and can have significant associated climate mitigation and resilience benefits, such as sequestering carbon and protecting coastal areas from storm surge. Particularly positive measures include wetland and marine area protection, habitat restoration, and native species repopulation.
- ✓ This category includes Medium Green shading due to the inclusion of nutrient credits and wetland mitigation banking.



3. Provision of services for restoring natural habitats (for example, use of drones to plant mangroves, monitoring services to enforce fishing quotas, repopulation of native species in a landscape).
4. Nutrient credit schemes to reduce the amount of pollutants discharged into water bodies (nutrient trading in regulated markets).
5. Watershed management activities (linked to improved land management, agricultural practices, and sanitation) to improve water quality and reduce sedimentation in downstream ecosystems (for example, reefs).

These concepts while potentially positive for nature on balance, have some pitfalls in that they can allow for harm to water quality or wetland ecosystems in one location in exchange for improvements or conservation measures in another. While this can reduce costs, if not carefully designed and monitored, these measures are not guaranteed to create net environmental or ecosystem benefits. Furthermore, the pollution or wetland conversion that is permitted under these systems and “offset” elsewhere can create cascading local effects given the spatially explicit nature of pollution effects and watershed function. According to the issuer, IFC would only engage in these markets with strict measurement and verification measures that ensure overall benefits.

- ✓ Improving upstream watershed activities to improve water quality in downstream ecosystems is positive, but the broad nature of this criterion makes careful project screening and selection essential to avoid climate and environmental risks and impacts.
- ✓ The issuer informs us that fossil fuel-based monitoring vessels are ineligible under the framework fossil fuel exclusion.
- ✓ While carbon credits are mentioned in the framework, the issuer informs us that they are excluded from eligibility.

Nature-Based Solutions



1. Natural or ecological infrastructure that prevents runoff of agrochemicals and sediment into rivers or coastal water basins (for example, swales, biofiltration).
2. Constructed wetlands for water treatment (primary through tertiary) provided that they do not interfere with, and ideally complement, any natural wetlands that are in the project’s area of impact.

Dark Green to Medium Green

- ✓ Harnessing nature to improve water quality and management has both positive outcomes for freshwater and marine areas as well as significant potential biodiversity and climate co-benefits. Wetland, mangrove, coral reef, and forest conservation or restoration as well as urban green stormwater infrastructure are particularly positive contributions.





3. Watershed management practices to decrease runoff, sedimentation, and siltation, and increase recharge.
 4. Natural infrastructure to reduce water temperatures of used water discharged into waterways.
 5. Natural infrastructure or a combination of natural and gray infrastructure focused on managing stormwater and integrating conventional coastal and riverine flood protection infrastructure with ecological infrastructure (for example, mangroves with seawalls, and marshes with levees)
 6. Conservation or rehabilitation of wetlands to reduce flooding and soil/ water salination.
 7. Conservation or rehabilitation of mangroves to reduce flooding and soil erosion, increase coastal resilience, and sequester carbon.
 8. Conservation or rehabilitation of coral reefs to reduce storm surges and flooding.
 9. Use of forest buffers, agricultural strips, swales, and other techniques to avoid runoff of nutrients and sediments.
 10. Parametric insurance schemes for green/blue infrastructure such as coral reefs, fisheries, and coastal protection.
 11. Green/blue urban infrastructure such as green roofs, green facades, permeable surfaces, rain gardens, bioswales, canals, and ponds to address the effects of drought, floods, and urban heat.
 12. Nature-based solutions for solar farms to cool solar panels and enhance their performance (for example, seeding with native grasses and flowers, agrivoltaics)
- ✓ Be aware that the term “nature-based solutions” has a stricter definition and social components as originally developed by the International Union for Conservation of Nature (IUCN).¹ Here and elsewhere, it has taken on broader meanings and may not meet those specific criteria.
 - ✓ For green-grey hybrid projects, be aware of grey material embodied emissions, such as from cement, and emissions associated with energy used during construction.
 - ✓ Parametric insurance schemes (i.e., those that pay out upon a trigger event according to a predetermined index) can be a beneficial resilience measure for marine ecosystems.

Table 3. Eligible biodiversity protection project categories

¹ See <https://www.iucn.org/our-work/nature-based-solutions> for further information.



Ocean and Water Protection Categories

Category	Eligible project types and criteria from IFC’s Guidelines for Blue Finance	Green Shading and considerations
<p>Water supply</p>  	<p>Investments in the research, design, development, and implementation of efficient and clean water supply</p> <p>Criteria:</p> <ol style="list-style-type: none"> 1. New drinking water treatment, storage, and sustainable supply infrastructure that documents at least 20% water savings (e.g. reducing Non Revenue Water) per unit of service compared to a documented baseline. 2. Rehabilitation of existing water infrastructure that documents at least 20% water savings per unit of service compared to a documented baseline. 3. More sustainable desalination plants that help protect groundwater depletion and wetlands and avoid hypersaline pollution of the environment (e.g., ISO standard 23446). 4. Water efficiency technologies and equipment and water management activities that reduce water footprint. This includes the financing or refinancing of technologies (e.g. drip irrigation, water recycling solutions, etc.) where the manufacturers show the respective substantial water efficiency benefits or a documented reduction in water consumption in land based aquaculture, agriculture and irrigation, and residential, commercial, and industrial uses. 	<p>Light to Medium Green</p> <ul style="list-style-type: none"> ✓ Improving water efficiency can reduce emissions, enhance resilience, and limit negative local environmental impacts from water overuse. There is a 20% minimum threshold for improvements relative to business-as-usual practices. According to the issuer, efficiency improvements to water systems running on fossil fuels are not eligible under the green bond framework, which is also a strength. ✓ Construction and upgrades of water infrastructure may involve fossil fuel usage, while emissions embodied in building materials or water efficiency equipment may also be significant. Whenever possible, we encourage the issuer to make efforts to reduce emissions associated with construction and materials. ✓ Other specific climate impacts and risks will depend on the types of end users supported, project design, and local conditions. We encourage IFC to carefully screen and monitor projects with consideration for these aspects. ✓ While desalination projects can enhance resilience, they are highly energy intensive and can generate chlorine and copper effluent pollution. According to the issuer, facilities eligible under the framework must run on renewable energy sources and local pollution concerns will be managed under its Performance Standards.



Water sanitation Investments in the research, design, development, and implementation of water treatment solutions.



Criteria:

1. New or expansion of water treatment infrastructure.
2. Rehabilitation or retrofit of existing water treatment infrastructure.
3. Wastewater treatment plants, including industrial, agri-business, commercial, residential, or city level. This also include biogas and heat exchange systems at wastewater treatment plants to increase their efficiency and effectiveness.



Light to Medium Green

- ✓ Improving wastewater management and treatment are important from a climate perspective, both to reduce emissions, improve resiliency, and also reduce negative local environmental impacts, such as water pollution. The interval of shades reflects the broad nature of the category and the absence of any specific thresholds.
- ✓ Untreated sewage threatens water quality, and new and or improved wastewater infrastructure, including treatment and disposal systems, are important to prevent pollution. Best practices include applying a circular economy approach to the water treatment process by using as much of waste streams as possible, such as using sewage sludge for biogas production.
- ✓ Specific climate impacts and risks will depend on the types of end users supported, project design, energy sourcing, and local conditions. We encourage IFC to carefully screen and monitor projects with consideration for these aspects.
- ✓ Construction and upgrades of wastewater infrastructure may involve fossil fuel usage, while emissions embodied in building materials are also typically significant. Whenever possible, we encourage the issuer to make efforts to reduce emissions associated with materials.

Ocean- or water-friendly products Investments in the value chain, including production, packaging, and distribution, of environmentally-friendly products that avoid water or ocean pollution.



Criteria:

1. Research, design, manufacturing, trade, or retail of household products with a sustainable supply of raw materials that can displace existing harmful products or reduce nitrogen and



Light to Medium Green

- ✓ The issuer informs us that all products will need to provide evidence of sufficient climate and environmental performance and potentially achieve applicable certifications to be eligible, but performance thresholds are not fully defined. According to the issuer, trade and retail aspects of this category will only be eligible for the highest environmentally performing products, though what this entails is not specified. The interval of shades reflects the broad nature of the category and the absence of any specific thresholds.



phosphorus loads of the aquatic environment, including but not limited to:

- Biodegradable and phosphate-free detergents and shampoos, such as enzyme-based products.
 - Biodegradable and phosphate-free shampoo bars, deodorant bars, such as a soap bar, and cosmetics without plastic packaging.
 - Microbead-free toothpaste in non-plastic container
2. Research, design, manufacturing, trade, or retail of alternative low carbon and biodegradable materials (e.g., Lyocell) to fossil-based fibers (e.g., polyester).
 3. Research, design, manufacturing, trade, or retail of biodegradable plant based plastics and packaging or compostable plastics and packaging in locations where compostable facilities are readily available.

- ✓ We encourage IFC to monitor all projects in this category to ensure they are leading to product substitution and associated positive environmental outcomes (rather than reflecting market growth generally without displacing more harmful alternatives).
- ✓ Reducing nitrogen and phosphorous pollution through improved materials and products can prevent eutrophication, hypoxic “dead zones,” and associated harm to aquatic biodiversity and ecosystems as well as human health and livelihoods.
- ✓ Avoiding plastic packaging and microbeads also prevents harm to wildlife and environmental quality while reducing links to fossil fuel feedstocks.
- ✓ Substituting alternative low carbon, biodegradable, and plant-based materials for plastic or polyester is positive from a pollution prevention perspective and in avoiding links to fossil fuel feedstocks.
- ✓ We encourage IFC to ensure materials are sourced sustainably, with particular attention to avoiding links to direct or indirect deforestation and associated emissions from organic feedstocks. IFC’s Performance Standards address some of these concerns.

Ocean-friendly chemicals and plastics sectors

Investments in the research, design, development, and implementation of measures to manage, reduce, recycle, and treat plastic, pollution, or chemical waste in coastal and river basin areas.



Criteria:

1. Infrastructure that prevents runoff of agrochemicals, industrial chemicals, and mercury into areas connected to rivers or coastal water basins.
2. Replacement of phosphate-based or nitrogen-based synthetic fertilizers with alternative sustainable and biodegradable



Medium to Light Green

- ✓ Infrastructure, urban drainage systems, and flood mitigation systems that prevent chemical runoff and plastic or other solid waste pollution from reaching rivers and coastal basis are positive steps to avoid harm to human health, biodiversity, and ecosystems.
- ✓ Be aware of emissions from the energy and materials needed to construct this infrastructure and potential local pollution and biodiversity impacts associated with construction. We also encourage the issuer to ensure proper disposal of all wastes collected from these activities. Local pollution elsewhere and fossil fuel-based energy in waste processing



-
- fertilizers and supplements, in areas connected to rivers or coastal water basins.
3. Use of recycled plastics for manufacturing in a circular economy approach.
 4. Plastics collection and recycling facilities, substitution of plastics packaging with sustainable and biodegradable materials, and reusing or repurposing of plastics in areas connected to rivers or coastal water basins.
 5. Urban drainage systems that prevent plastics, chemicals, or pollutants runoff in areas connected to rivers or coastal water basins.
 6. Flood mitigation systems that prevent plastics, chemicals, solid waste, or pollutants runoff in areas connected to rivers or coastal water basins.
- should be avoided, while circular solutions and recycling should be encouraged. IFC's Performance Standards and other green bond framework selection criteria cover some of these aspects.
- ✓ Definitions of alternative sustainable and biodegradable fertilizers and supplements are unclear. Some substitutes for synthetic fertilizers may have lifecycle emissions benefits, but this depends on feedstock, methane management, and transportation distance. Animal waste is ineligible under framework livestock exclusions.
 - ✓ We encourage the issuer to ensure that these alternatives are applied using "right time, right place, right amount" best practices to avoid unnecessary emissions or local pollution.
 - ✓ Circular solutions involving improved plastic collection and recycling are an important part of the low carbon future. By reducing upstream demand for raw material extraction as well as preventing downstream waste from going into ecosystems, landfills, or incineration facilities, these solutions have the potential to limit climate emissions, local pollution, and harmful human health and biodiversity impacts.
 - ✓ At the same time, be aware that recycling entails energy consumption, emissions, and discharges to the environment that require mitigation strategies.
 - ✓ Be aware that plastics are derived from fossil fuel feedstocks. Even if plastics are recycled, they typically require additions of new plastic materials during processing, maintaining links to fossil fuels. While definitions of sustainable materials could be further clarified, IFC's efforts to find substitutes for plastic packaging are therefore positive.
-



Sustainable shipping and port logistics sectors



Investments in the research, design, development, and implementation of water and waste management and reduction measures in shipping vessels, shipping yards, and ports.

Criteria:

1. Investments in ballast water treatment and shipping vessels to comply with the International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM Convention) to avoid spread of invasive alien species (e.g., ISO standard 11711).
2. Investments in membrane bioreactor-type water treatment equipment and facilities for all black water and grey water on shipping or cruising vessels.
3. Investments in bilge water treatment in shipping vessels.
4. Investments to reduce maritime air and noise pollution.
5. Investments in improvement of oil (fuel) spill prevention, risks safeguard, and recovery facilities.
6. Solid waste receiver facilities at ports and terminals for the collection of garbage.

Light Green

- ✓ Be aware of this category's association with significant emissions from the shipping sector, which still relies heavily on fossil fuels, and associated potential lock-in risks. The issuer informs us it seeks to avoid potentially extending the life of fossil fuel-based shipping assets with its green bond investments.
- ✓ According to the issuer, oil spill prevention activities would only be associated with shipping fuels, not oil and gas sector operations or tankers, which are ineligible under the framework fossil fuel exclusion.
- ✓ Ballast water treatment, black and grey water treatment, bilge water treatment, noise and air pollution prevention, and solid waste management are important pollution prevention measures to avoid harm to human health and local ecosystems.
- ✓ We encourage the issuer to ensure proper disposal of all wastes generated from pollution prevention activities, such as sewage sludge, oil, or solid waste. Local pollution elsewhere and fossil fuel-based energy in waste processing should be avoided, while circular solutions and recycling should be encouraged. Note that waste prevention should be prioritized in the waste management hierarchy. IFC's Performance Standards and other green bond framework selection criteria cover some of these aspects.

Fisheries, aquaculture, and seafood value chain

Sustainable production and waste management and reduction measures that meet, keep, or exceed Marine Stewardship Council certification standards or equivalent certification standards approved by IFC.

Criteria:

1. Sustainable land-based aquaculture production of high value niche products, such as crustaceans, sea urchins, ornamental corals, and fish.

Medium to Light Green

- ✓ Sustainable fishing and aquaculture have the potential to produce sources of protein with a lower carbon and environmental footprint than meat. This will be crucial as the global population grows and consumption patterns become more resource intensive.
- ✓ However, fishing practices based on over-exploitation and using a fossil fuel-based fleet of vessels as well as plastic pollution are serious concerns. For aquaculture, risks include the use of unsustainable or deforestation-



2. Sustainable cultivation of bivalves for algae and nutrient removal in eutrophic coastal waters.
 3. Sustainable production of algae and other marine microorganisms or macroorganisms to produce food, feed, pharmaceuticals, cosmetics, or other bio-based products through bio-technological applications.
 4. Cold chain and storage for small- and medium-sized fishing in areas with sustainable fishing quotas.
 5. Medium- to large-scale processing and product development, with an emphasis on pelagic species in jurisdictions with enforced sustainable fishing quotas.
 6. Small- to medium-scale biorefineries for fish processing by-products (e.g., oil, collagen, amino acid, and mineral production) in jurisdictions with enforced fishing quotas.
 7. Investments in fisheries, including investments in tuna fisheries, to meet, keep, or exceed the Marine Stewardship Council certification standard or equivalent.
 8. Investments in aquaculture to meet, keep, or exceed the Aquaculture Stewardship Council certification standard or equivalent.
 9. Production, trade, or retail of seafood products with the blue Marine Stewardship Council label or the Aquaculture Stewardship Council label.
 10. Investments for a Fishery Improvement Project registered at the International Seafood Sustainability Foundation.
 11. Traceability systems to ensure sustainability of operations, facilities, and supply chain in the fishing industry.
- causing (soy) feed in aquaculture feed, energy and water use, local pollution, and harm to native fish species and ecosystems.
- ✓ Certification schemes and “sustainable practices” can go some way towards allaying those concerns but have been criticized for lack of stringency and loopholes.
 - ✓ While the IFC’s intention to ensure sustainability of fishing operations by limiting eligible investments to “jurisdictions with enforced sustainable fishing quotas” is positive, the definition and enforcement of this intention is not always clear in practical terms.
 - ✓ According to the issuer, these risks will be addressed in project screening and selection. Safeguards include ensuring sustainable fishing quotas are monitored and enforced, prioritizing aquaculture projects using worm and insect feed while screening out unsustainable soy and fish meal feed, and ensuring aquaculture projects do not harm ecosystems such as mangroves or native fish.
 - ✓ Improved cold chain storage can help reduce food loss and waste from perishable products such as fish and seafood, avoiding unnecessary greenhouse gas emissions and decreasing pressure on fisheries and other resources.
 - ✓ According to the issuer, cold chain investments must be energy efficient, cannot use fossil fuels and must be electrified under the fossil fuel exclusion, and must use low global warming potential refrigerants. Food loss reductions must be documented to ensure benefits and fishing levels must be monitored to ensure sustainability beyond legal quotas. Only fish for human consumption is eligible.
 - ✓ Supporting more sustainable fishery supply chains can improve environmental outcomes. Biorefineries and processing facilities must be



electrified under the fossil fuel exclusion and fishing levels must be monitored to ensure sustainability beyond legal quotas.

- ✓ The issuer informs us the trade and retail of seafood products will not be eligible under IFC’s green bond framework.
- ✓ Be aware of social concerns, such as forced labour and human trafficking, throughout the fishing and seafood processing industries. IFC’s Performance Standards mitigate these risks.

Marine ecosystem restoration

Marine ecosystem restoration



Criteria:

1. Investments in conserving, improving, and restoring marine and coastal ecosystems.
2. Investments in the development of ecosystems insurance products related to critical aquatic ecosystems, such as coral reefs, mangroves, and wetlands.
3. Investments in information system, technology, and instruments deployed for measuring, tracking, and reporting physical and chemical indicators of the water body to achieve sustainable fishery and aquaculture management, water-related ecosystem restoration, and disaster resilience.
4. Investments into promising new restoration techniques, such as artificial habitat restoration structures using biodegradable potato starch and coral reef restoration projects.

Dark Green

- ✓ Conservation of biodiversity, natural ecosystems, and habitats are positive measures from a 2050 perspective. These projects can also have substantial co-benefits for climate mitigation and adaptation due to critical ecosystem services including carbon sequestration, local climate regulation, storm surge protection, etc.
- ✓ Development of ecosystem insurance products is a beneficial risk management and resilience measure.
- ✓ Monitoring systems, technology, and equipment are important measures to ensure sustainable marine management. Be aware of potential fossil fuel emissions from boats used in monitoring. Aquaculture and fisheries being monitored can also have unsustainable aspects if not carefully managed, such as local pollution, overfishing, and biodiversity impacts.
- ✓ New restoration techniques should be carefully planned and tested to avoid potential unintended consequences to biodiversity and environmental quality.

Sustainable tourism services

Sustainable tourism services

Criteria:

Light Green

- ✓ This shading assumes only biodiversity conservation-specific expenditures that directly support nature and ecosystems are eligible. According to the issuer, proceeds can only be used in tourism services or



1. Licensed certified sustainable tourism in the vicinity of marine conservation areas, within less than 20 kilometers from the marine-protected areas and internationally recognized areas (e.g., KBAs, IBAs, Ramsar Sites), with inclusive livelihood elements and business opportunities, such as resorts, hotels, boat operators, sailing schools, and diving centers.
2. Nature-based freshwater and marine visitor centers showcasing the environment and disseminating research and knowledge about lakes, wetlands, reefs, and other aquatic ecosystems.

activities that meet this requirement. Broader criteria in the IFC Guidelines for Blue Finance that allow for tourism infrastructure and operators within 20 kilometres are insufficient for green bond framework eligibility.

- ✓ We strongly encourage tourism projects that are climate resilient and avoid significant emissions, local pollution, and biodiversity impacts.
- ✓ Be aware that developments of new ecotourism projects could catalyse additional environmental impacts from development of supporting infrastructure and emissions from additional air travel.

Ocean-friendly offshore renewable energy facilities

Criteria:

1. Offshore wind energy facilities, such as wind farms, that do not harm marine ecosystems. The offshore wind farm may include additional features such as fisheries sanctuaries for juveniles of certain marine species, substantial artificial reef elements, and other additional measures promoting marine biodiversity.²



Dark Green

- ✓ Renewable energy, including offshore wind power, plays a vital role on the path to a low carbon transition.
- ✓ It is positive that during siting, IFC will undertake biodiversity sensitivity mapping and strategic environmental assessment as well as potentially include additional features to support marine biodiversity.
- ✓ Be aware of turbine embodied and construction emissions, end-of-life concerns, and local community resistance. IFC's Performance Standards will mitigate some of these risks.
- ✓ Wind projects connected to offshore oil and gas extraction are ineligible under framework fossil fuel exclusions.

Table 4. Eligible ocean and water protection project categories

² Suitable sites must be informed by biodiversity sensitivity mapping and Strategic Environmental Assessment. No offshore wind projects will be sited in Legally Protected Areas or Internationally Recognized Areas.









3 Terms and methodology

This note provides CICERO Shades of Green’s second opinion of the client’s framework dated December 2022 with a revision in March 2023. IFC’s green bond framework has been revised with regards to the specific wording of some project categories and levels of performance criteria. Since this updated second opinion based on the revised framework is not a full revision, the expiry date remains the same as the one dated December 2022.. Any further amendments or updates to the framework require a revised second opinion. CICERO Shades of Green encourages the client to make this second opinion publicly available. If any part of the second opinion is quoted, the full report must be made available.

The second opinion is based on a review of the framework and documentation of the client’s policies and processes, as well as information gathered during meetings, teleconferences and email correspondence.

‘Shades of Green’ methodology

CICERO Shades of Green second opinions are graded dark green, medium green or light green, reflecting a broad, qualitative review of the climate and environmental risks and ambitions. The shading methodology aims to provide transparency to investors that seek to understand and act upon potential exposure to climate risks and impacts. Investments in all shades of green projects are necessary in order to successfully implement the ambition of the Paris agreement. The shades are intended to communicate the following:

Shading	Examples
 Dark Green is allocated to projects and solutions that correspond to the long-term vision of a low-carbon and climate resilient future.	 Solar power plants
 Medium Green is allocated to projects and solutions that represent significant steps towards the long-term vision but are not quite there yet.	 Energy efficient buildings
 Light Green is allocated to transition activities that do not lock in emissions. These projects reduce emissions or have other environmental benefits in the near term rather than representing low carbon and climate resilient long-term solutions.	 Hybrid road vehicles

The “Shades of Green” methodology considers the strengths, weaknesses and pitfalls of the project categories and their criteria. The strengths of an investment framework with respect to environmental impact are areas where it clearly supports low-carbon projects; weaknesses are typically areas that are unclear or too general. Pitfalls are also raised, including potential macro-level impacts of investment projects.

Sound governance and transparency processes facilitate delivery of the client’s climate and environmental ambitions laid out in the framework. Hence, key governance aspects that can influence the implementation of the green bond are carefully considered and reflected in the overall shading. CICERO Shades of Green considers four factors in its review of the client’s governance processes: 1) the policies and goals of relevance to the green bond framework; 2) the selection process used to identify and approve eligible projects under the framework, 3) the management of proceeds and 4) the reporting on the projects to investors. Based on these factors, we assign an overall governance grade: Fair, Good or Excellent. Please note this is not a substitute for a full evaluation of the governance of the issuing institution, and does not cover, e.g., corruption.



Assessment of alignment with Green Bond Principles

CICERO Shades of Green assesses alignment with the International Capital Markets' Association's (ICMA) Green Bond Principles. We review whether the framework is in line with the four core components of the GBP (use of proceeds, selection, management of proceeds and reporting). We assess whether project categories have clear environmental benefits with defined eligibility criteria. The Green Bonds Principles (GBP) state that the “overall environmental profile” of a project should be assessed. The selection process is a key governance factor to consider in CICERO Shades of Green's assessment. CICERO Shades of Green typically looks at how climate and environmental considerations are considered when evaluating whether projects can qualify for green finance funding. The broader the project categories, the more importance CICERO Shades of Green places on the selection process. CICERO Shades of Green assesses whether net proceeds or an equivalent amount are tracked by the issuer in an appropriate manner and provides transparency on the intended types of temporary placement for unallocated proceeds. Transparency, reporting, and verification of impacts are key to enable investors to follow the implementation of green finance programs.



Appendix 1: Referenced Documents List

Document Number	Document Name	Description
1	Green Bond Framework	IFC's green bond framework dated December 2022
2	Common Principles for Climate Change Mitigation Finance Tracking	Joint MDB and IDFC guidance on mitigation finance dated October 2021
3	Common Principles for Climate Change Adaptation Finance Tracking	Joint MDB and IDFC guidance on adaptation finance dated 2021
4	Biodiversity Finance Reference Guide	IFC's biodiversity finance guidance dated November 2022
5	Guidelines for Blue Finance	IFC's guidance for financing the blue economy dated January 2022
6	IFC Climate Implementation Plan	Opportunities to support the climate transition dated April 2016
7	IFC's Definitions and Metrics for Climate-Related Activities	Terminology reference dated April 2017
8	Green Bond Impact Report Financial Year 2021	IFC's 2021 green bond impact reporting
9	Stepping Up in a Time of Uncertainty: 2022 Annual Report	IFC's 2022 annual reporting including sustainability disclosures
10	Performance Standards	IFC's ESG performance standards webpage
11	Environmental, Health, and Safety Guidelines	IFC's EHS guideline webpage
12	Corporate Governance Overview	IFC's corporate governance webpage
13	Due Diligence	IFC's due diligence webpage
14	IFC Exclusion List	IFC's list of excluded activities released in 2007
15	Carbon Neutral Commitment for IFC's Own Operations	IFC's carbon neutrality and offset approach
16	World Bank Group Climate Change Action Plan 2016-2020	World Bank climate priorities and strategies dated 2016
17	World Bank Group Climate Change Action Plan 2021-2025	World Bank climate priorities and strategies dated 2021
18	The World Bank Group's Action Plan on Climate Change Adaptation and Resilience	World Bank mitigation and adaptation strategies dated 2019
19	Joint Report on Multilateral Development Banks' Climate Finance 2021	Climate finance reporting from World Bank Group and other multilateral development banks dated 2021



Appendix 2: About CICERO Shades of Green

CICERO Shades of Green is a subsidiary of the climate research institute CICERO. CICERO is Norway's foremost institute for interdisciplinary climate research. We deliver new insight that helps solve the climate challenge and strengthen international cooperation. CICERO has garnered attention for its work on the effects of manmade emissions on the climate and has played an active role in the UN's IPCC since 1995. CICERO staff provide quality control and methodological development for CICERO Shades of Green.

CICERO Shades of Green provides second opinions on institutions' frameworks and guidance for assessing and selecting eligible projects for green bond investments. CICERO Shades of Green is internationally recognized as a leading provider of independent reviews of green bonds, since the market's inception in 2008. CICERO Shades of Green is independent of the entity issuing the bond, its directors, senior management and advisers, and is remunerated in a way that prevents any conflicts of interests arising as a result of the fee structure. CICERO Green operates independently from the financial sector and other stakeholders to preserve the unbiased nature and high quality of second opinions.

We work with both international and domestic issuers, drawing on the global expertise of the Expert Network on Second Opinions (ENSO). Led by CICERO Shades of Green, ENSO contributes expertise to the second opinions, and is comprised of a network of trusted, independent research institutions and reputable experts on climate change and other environmental issues, including the Basque Center for Climate Change (BC3), the Stockholm Environment Institute, the Institute of Energy, Environment and Economy at Tsinghua University, the International Institute for Sustainable Development (IISD) and the School for Environment and Sustainability (SEAS) at the University of Michigan.

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- ★ **2021 Largest External Reviewer**, Climate Bonds Initiative Awards
 - ★ **2020 External Assessment Provider Of The Year**, Environmental Finance Green Bond Awards
 - ★ **2020 Largest External Review Provider In Number Of Deals**, Climate Bonds Initiative Awards
 - ★ **2019 External Assessment Provider Of The Year**, Environmental Finance Green Bond Awards
 - ★ **2019 Largest Green Bond SPO Provider**, Climate Bonds Initiative Awards
 - ★ **2018 External Assessment Provider Of The Year**, Environmental Finance Green Bond Awards
 - ★ **2018 Largest External Reviewer**, Climate Bonds Initiative Awards
 - ★ **2017 Best External Assessment Provider**, Environmental Finance Green Bond Awards
 - ★ **2016 Most Second Opinions**, Climate Bonds Initiative Awards