

Second-Party Opinion

Mamoura Diversified Global Holding PJSC Green Finance Framework



Evaluation Summary

Sustainalytics is of the opinion that the Mamoura Diversified Global Holding PJSC Green Finance Framework is credible and impactful and aligns with the four core components of the Green Bond Principles 2021 and the Green Loan Principles 2023. This assessment is based on the following:



USE OF PROCEEDS The eligible categories for the use of proceeds – Green Buildings, Energy Efficiency, Renewable Energy, Pollution Prevention and Control and Clean Transportation – are aligned with those recognized by the Green Bond Principles and the Green Loan Principles. Sustainalytics considers that investments in the eligible categories will lead to positive environmental impacts and advance the UN Sustainable Development Goals, specifically SDGs 7, 9, 11 and 12.



PROJECT EVALUATION AND SELECTION Mamoura Diversified Global Holding PJSC has established a Green Finance Working Group which will be responsible for reviewing and selecting a green investment portfolio in accordance with the eligibility criteria. The group is chaired by the Executive Director of Treasury and Investor Relations and comprises the heads of relevant internal divisions. Additionally, there are due diligence processes in place that address the environmental and social risks of investments and the activities across their investment cycle. Sustainalytics considers as aligned with market practice.



MANAGEMENT OF PROCEEDS The Green Finance Working Group is responsible for overseeing and tracking the allocation of proceeds. Mamoura Diversified Global Holding PJSC intends to achieve full allocation of proceeds within 12 months of issuance. Pending full allocation, proceeds will be temporarily held or invested in cash or cash equivalents instruments, money market funds, at the Working Group's discretion. The Framework may include multi-tranche financing instruments, with tranches being labelled only if the proceeds are allocated as per the eligibility criteria in this Framework. Sustainalytics considers this as aligned with market practice.



REPORTING Mamoura Diversified Global Holding PJSC intends to report annually on the allocation and impact of the proceeds until full allocation on its website. Allocation reporting will include information on an aggregated basis on total allocation per category, unallocated amounts, share of financing versus refinancing and geographical location. Additionally, Mamoura Diversified Global Holding PJSC intends to report on relevant impact metrics. Sustainalytics considers the intent to allocation and impact reporting as aligned with market practice.

Evaluation date	September 29, 2023
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Issuer Location	Abu Dhabi, United Arab Emirates
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Introduction

Mamoura Diversified Global Holding PJSC (“MDGH” or the “Company”), a sovereign wealth fund, is a wholly owned subsidiary of Mubadala Investment Company (“Mubadala”), of which the Government of Abu Dhabi is the sole shareholder. The Company is headquartered in Abu Dhabi and has a presence in more than 50 countries. The majority of its investments are in the US, Canada and Germany in the fields of aerospace, energy and industry, healthcare, information and communication technology, infrastructure, metals and mining, semiconductors, real estate and hospitality, and services.

MDGH has developed the Mamoura Diversified Global Holding PJSC Green Finance Framework dated September 2023, (the “Framework”) under which it intends to issue green bonds, private placements¹ loans, sukuks, medium-term notes and commercial paper and use the proceeds to finance or refinance, in whole or in part, existing or future projects that contribute to the positive environmental impacts globally, in addition to aligning with the decarbonization ambitions of the UAE.

The Framework defines eligibility criteria in five green areas:

1. Green Buildings
2. Energy Efficiency
3. Renewable Energy
4. Pollution Prevention and Control
5. Clean Transportation

MDGH engaged Sustainalytics to review the Mamoura Diversified Global Holding PJSC Green Finance Framework and provide a Second-Party Opinion on the Framework’s environmental credentials and its alignment with the Green Bond Principles 2021 (GBP)² and the Green Loan Principles 2023 (GLP).³ The Framework has been published in a separate document.⁴

Scope of work and limitations of Sustainalytics’ Second-Party Opinion

Sustainalytics’ Second-Party Opinion reflects Sustainalytics’ independent⁵ opinion on the alignment of the reviewed Framework with current market standards and the extent to which the eligible project categories are credible and impactful.

As part of the Second-Party Opinion, Sustainalytics assessed the following:

- The Framework’s alignment with the Green Bond Principles 2021, as administered by ICMA, and the Green Loan Principles 2023, as administered by LMA, APLMA and LSTA;
- The credibility and anticipated positive impacts of the use of proceeds; and
- The alignment of the issuer’s sustainability strategy and performance and sustainability risk management in relation to the use of proceeds.

For the use of proceeds assessment, Sustainalytics relied on its internal taxonomy, version 1.14, which is informed by market practice and Sustainalytics’ expertise as an ESG research provider.

As part of this engagement, Sustainalytics held conversations with various members of the Company’s management team to understand the sustainability impact of its business processes and planned use of proceeds, as well as the management of proceeds and reporting aspects of the Framework. The Company representatives have confirmed that: (1) they understand it is the sole responsibility of the Company to ensure that the information provided is complete, accurate and up to date; (2) that they have provided Sustainalytics with all relevant information and (3) that any provided material information has been duly disclosed in a timely manner. Sustainalytics also reviewed relevant public documents and non-public information.

¹ MDGH has confirmed to Sustainalytics that private placement will be restricted to debt placement and will exclude the sale of stock shares to investors.

² The Green Bond Principles are administered by the International Capital Market Association and are available at <https://www.icmagroup.org/green-social-and-sustainability-bonds/green-bond-principles-gbp/>.

³ The Green Loan Principles are administered by the Loan Market Association, Asia Pacific Loan Market Association and Loan Syndications and Trading Association and are available at <https://www.lsta.org/content/green-loan-principles/>.

⁴ The Mamoura Diversified Global Holding PJSC Green Finance Framework is available at: <https://www.mubadala.com/en/investors/overview>

⁵ When operating multiple lines of business that serve a variety of client types, objective research is a cornerstone of Sustainalytics and ensuring analyst independence is paramount to producing objective, actionable research. Sustainalytics has therefore put in place a robust conflict management framework that specifically addresses the need for analyst independence, consistency of process, structural separation of commercial and research (and engagement) teams, data protection and systems separation. Last but not the least, analyst compensation is not directly tied to specific commercial outcomes. One of Sustainalytics’ hallmarks is integrity, another is transparency.

This document contains Sustainalytics' opinion of the Framework and should be read in conjunction with that Framework.

Any update of the present Second-Party Opinion will be conducted according to the agreed engagement conditions between Sustainalytics and MDGH.

Sustainalytics' Second-Party Opinion, while reflecting on the alignment of the Framework with market standards, is no guarantee of alignment nor warrants any alignment with future versions of relevant market standards. Furthermore, Sustainalytics' Second-Party Opinion addresses the anticipated impacts of eligible projects expected to be financed with bond and loan proceeds but does not measure the actual impact. The measurement and reporting of the impact achieved through projects financed under the Framework is the responsibility of the Framework owner. MDGH is encouraged to update the Framework after 24 (twenty-four) months from the evaluation date, if necessary, and seek an update to the Second-Party Opinion to ensure ongoing alignment of the Framework with market standards and expectations.

In addition, the Second-Party Opinion opines on the potential allocation of proceeds but does not guarantee the realised allocation of the bond and loan proceeds towards eligible activities.

No information provided by Sustainalytics under the present Second-Party Opinion shall be considered as being a statement, representation, warrant or argument, either in favour or against, the truthfulness, reliability or completeness of any facts or statements and related surrounding circumstances that MDGH PJSC has made available to Sustainalytics for the purpose of this Second-Party Opinion.

Sustainalytics' Opinion

Section 1: Sustainalytics' Opinion on the Mamoura Diversified Global Holding PJSC Green Finance Framework

Sustainalytics is of the opinion that the Mamoura Diversified Global Holding PJSC Green Finance Framework is credible and impactful and aligns with the four core components of the GBP and GLP. Sustainalytics highlights the following elements of the Framework:

- Use of Proceeds:
 - The eligible categories—Green Buildings, Energy Efficiency, Renewable Energy, Pollution Prevention and Control, and Clean Transportation—are aligned with those recognized by the GBP and GLP.
 - MDGH has established a 36-month look-back period for refinancing activities, which Sustainalytics considers to be aligned with market practice.
 - Sustainalytics notes that the projects financed or refinanced under the Framework may be located globally, including but not limited to UAE, EU, UK, US, Switzerland and Korea. Sustainalytics notes that the projects financed under the Framework are expected to facilitate the transition to a low-carbon and sustainable economy in the UAE and other countries.
 - In addition, the Framework includes private equity investments⁶ in pure-play companies with more than 90% of their revenue from the eligible activities mentioned under each category of the Framework. Sustainalytics notes that the GBP, SBP, GLP and SLP favour project-based lending and financing, which generally provides more transparency than non-project-based lending and financing. Nevertheless, Sustainalytics recognizes that the financing of pure play companies through green and social bonds is commonly accepted in the market as an approach that can generate positive impact.
 - In the case of any co- or jointly financed eligible green investments, only the amount invested by MDGH will constitute an eligible green investment, which Sustainalytics considers to be in line with market practice.
 - Under the Green Buildings category, MDGH may finance or refinance the construction, acquisition, or refurbishment of residential or commercial buildings in accordance with the following criteria. Sustainalytics considers these investments to be aligned with market practice, noting the following:

⁶ MDGH has confirmed that should any private equity be sold or exited from during the tenure of an ongoing green financing instrument, it will fall out of the eligible portfolio to be replaced with an eligible green investment as per the Framework.

- New or existing buildings have either i) an energy performance certificate rating of A; or ii) belong in the top 15% of the national or regional building stock based on primary energy demand (PED).
- Refurbishment of existing buildings leading to at least 30% reduction in PED post renovation.
- New, existing or refurbished buildings that have achieved or are expected to achieve one of the following green buildings certifications: i) LEED Gold or above⁷, ii) GSAS 4 star or above⁸, iii) DGNB Gold or above,⁹ iv) EDGE certified,¹⁰ v) Estidama Pearl Rating System 3 Pearl or above¹¹ with at least a 20% improvement over the baseline,¹² vi) Al Sa'fat Platinum Sa'fa,¹³ or vii) BREEAM Very Good or above.¹⁴ Sustainalytics encourages the Company to select BREEAM-certified buildings that score high enough in the energy category to fulfil the requirements for BREEAM Excellent in that category.
- Under the Energy Efficiency category MDGH may finance or refinance energy efficiency measures, which may include:
 - Measurement, regulation and control of energy performance in buildings through instruments, such as smart energy meters.
 - Installation or upgrade of the thermal envelope of buildings, energy-efficient windows, doors and lighting; and water usage appliances.
 - Installation, replacement, maintenance or repair of heating, ventilation and air-conditioning (HVAC) and water heating systems.
 - Investments may also include energy efficient equipment and technologies related to district heating and cooling distribution networks and heat and cooling generation. MDGH has confirmed that eligible district heating and cooling related investments will be limited to i) distribution networks that are powered by more than 50% renewables such as biomass and industrial waste heat; and ii) heat and cooling generation, where generation is 100% from renewables or industrial waste heat. In addition, industrial waste heat will exclude waste heat from fossil fuel production and operations. Furthermore, they may also include the use of electric heat pumps. Sustainalytics notes that heat pumps offer an energy-efficient heat transfer alternative to conventional systems. MDGH has confirmed to Sustainalytics that it will exclude the financing of heat pumps with high global warming potential refrigerants. Furthermore, Sustainalytics encourages MDGH to promote robust refrigerant leak control, detection and monitoring, while ensuring the recovery, reclamation, recycling or destruction of refrigerants at end of life for its borrowers.
 - Modernization of networks and supporting infrastructure to support 5G communication systems, such as the installation of new 5G networks and upgrading previous generation networks to 5G. Sustainalytics recognizes that, by enabling high-speed network connectivity, data solutions have the potential to support significant energy savings by end users across many sectors. Sustainalytics also acknowledges that the expansion of 5G networks may result in additional overall energy demands on telecommunications networks. Sustainalytics believes that the enabled savings outweigh the potential adverse effects of additional network demands and encourages MDGH to report on potential energy savings from such investments.
 - The Company has confirmed to Sustainalytics that eligible investments under the category will exclude i) financing of fossil fuel-powered equipment and ii) energy efficiency improvements in carbon-intensive and heavy industries.
 - Sustainalytics considers these investments to be aligned with market practice and encourages MDGH to report on estimated or achieved energy efficiency gains, where feasible.

⁷ LEED: <https://www.usgbc.org/leed>

⁸ GSAS: <https://sustainable-infrastructure-tools.org/tools/global-sustainability-assessment-system/>

⁹ DGNB: <https://www.dgnb.de/en/certification/important-facts-about-dgnb-certification/about-the-dgnb-system>

¹⁰ EDGE: <https://edge.gbci.org/>

¹¹ Estidama Pearl Rating System: <https://pages.dmt.gov.ae/en/Urban-Planning/Pearl-Building-Rating-System>

¹² MDGH considers ASHRAE 90.1 as the baseline. ASHRAE: <https://www.ashrae.org/technical-resources/bookstore/standard-90-1>

¹³ Al Sa'fat: <https://www.dm.gov.ae/municipality-business/al-safat-dubai-green-building-system/>

¹⁴ BREEAM: <https://bregroup.com/products/breeam/>

- Under the Renewable Energy category, MDGH may finance or refinance the generation and transmission of renewable energy and manufacturing of related equipment for solar, wind, geothermal, hydro, and hydrogen power. Sustainalytics considers these investments to be aligned with market practice, noting the following:
 - Photovoltaic and concentrated solar power (CSP) projects. For CSP projects, MDGH has confirmed that at least 85% of the electricity generated from the facility will be from solar-energy resources.
 - Onshore and offshore wind energy projects using wind tunnels and cubes.
 - Geothermal projects with a direct emissions intensity below 100 gCO₂e/kWh
 - Hydropower projects with a power density greater than 5 W/m² or a life cycle carbon intensity below 100 gCO₂e/kWh. Furthermore, MDGH has confirmed that for all new hydropower projects, a credible body will conduct an environmental impact assessment per project to ensure that no significant environmental and social risks, negative impacts, or controversies have been identified. Sustainalytics notes that MDGH will finance only new hydropower plants and has defined the estimated reservoir emissions intensity threshold at below 100 gCO₂e/kWh; or power density above 5 W/m². However, considering the longevity of hydropower assets, newly constructed facilities effectively lock in energy generation for a very extended period, favouring lower thresholds; or higher power densities for new facilities, Sustainalytics encourages MDGH to favour projects with emissions intensities below 50g CO₂e/kWh, or power density above 10 W/m².
 - Green hydrogen generation, where the generation is limited to facilities using hydrogen produced through electrolysis powered by renewables only.
 - Battery storage technologies that are connected directly to renewable sources or to the grid powered by 100% renewable sources.
 - Transmission and distribution lines and infrastructure dedicated for renewable energy sources to reduce curtailment and enable increased transmission and the use of renewable energy sources.
- Under the Pollution Prevention and Control category, MDGH may finance the development, technologies and services related to:
 - Soil remediation, MDGH has confirmed that these activities will not be connected to contamination or negative environmental externality of the investee company's activities.
 - Waste prevention by enabling the collection, sorting, cleaning, where collection supports source segregation of waste. Where waste collection vehicles are financed, they will align with the criteria under clean transportation.
 - Waste reduction through material recovery including sorting and waste recycling such as plastic recycling and packaging solutions. MDGH has confirmed that plastic recycling will be limited to mechanical recycling of plastic. Additionally, MDGH has confirmed that hazardous waste recycling and e-waste recycling will be excluded under this Framework.
 - Sustainalytics considers these investments to be aligned with market practice.
- Under the Clean Transportation category, MDGH may finance or refinance the development, manufacturing, purchase, maintenance and upgrade of: i) electric vehicles (EVs) for public passenger and freight transport with zero direct tailpipe emissions such as electrified rail, trams, metros and buses, bikes and ferries; and ii) supporting infrastructure, such as charging stations for electric or zero emission vehicles, electrified railways and subways, including bridges and tunnels, stations, terminals, rail service facilities, safety and traffic management systems. Sustainalytics notes that the Framework excludes the following: i) freight transportation by road dedicated to the transport of fossil fuels or fossil fuels blended with alternative fuels; ii) freight trains where fossil fuels account for more than 25% of mass; and iii) cargo ships and ferries where fossil fuels account for more than 50% of mass. Sustainalytics considers such investments to be in line with market practice.
- Sustainalytics notes that the Framework excludes financing in these activities as per the exclusionary list: i) exploration, production or transportation of fossil fuels; ii) manufacturing of petrochemicals; iii) activities and projects associated with livestock; iv) manufacture and production of finished alcoholic beverages; v) military contracting; vi) gambling; vii) weaponry;

- viii) manufacture and production of finished tobacco products; ix) nuclear power generation; x) activities/projects associated with child labour and forced labour; and xi) heat or power facilities with an emissions intensity above 100gCO₂e/kWh.
- Project Evaluation and Selection:
 - MDGH has established a Green Finance Working Group (the “Working Group”), which will be responsible for reviewing and evaluating the eligible green investment portfolio in line with the eligibility criteria. The Working Group is chaired by the Executive Director of Treasury and Investor Relations and comprises the Head of Responsible Investing, Executive Director of Financial Governance and Reporting, Head of Ethics and Compliance, Platform CFO of UAE Investments Platform, Platform CFO of Real Estate and Infrastructure Investments Platform and General Counsel of Group Finance and Capital Markets.
 - The Company has due diligence processes in place that address the environmental and social risks in its investments and the activities across its investment cycle.¹⁵ For additional details see Section 2.
 - Based on the presence of the Working Group and due diligence processes in place, Sustainalytics considers this aligned with market practice.
- Management of Proceeds:
 - The Working Group is responsible for overseeing the management of proceeds on a portfolio basis and will track the allocation of proceeds under the Framework using an internal tracking system.
 - MDGH intends to achieve full allocation of proceeds within 12 months of issuance. Pending full allocation MDGH will hold or invest, an amount equivalent to the unallocated proceeds in cash or cash equivalents, money market funds.
 - The Framework may include multi-tranche financing instruments. MDGH has confirmed to Sustainalytics that it will only label the tranches of such facilities whose proceeds will be allocated to the activities as per the eligibility criteria in the Framework.
 - Based on the use of an internal tracking system and the disclosure of the temporary use of proceeds, Sustainalytics considers this process to be in line with market practice.
- Reporting:
 - MDGH intends to report annually on the allocation and impact of the proceeds until full allocation. The allocation report and impact report will be made publicly available on MDGH’s website.
 - Allocation reporting may include the total amount of proceeds allocated to the eligible green investments’ portfolio, per eligible category; the balance (if any) of unallocated proceeds; the amount or the percentage of new financing and refinancing; and the geographical location of the investments, where feasible.
 - The Company will align its impact reporting with the ICMA Harmonised Framework for Impact Reporting Handbook¹⁶ on a best effort basis. This may include potential impact indicators on an aggregated basis such as, estimated annual reduced /or avoided GHG emissions; estimated annual energy consumption; estimated annual reduced or avoided energy consumption; share of buildings with green buildings certifications; total installed capacity; number of power storage facilities financed; amount of electricity transmission or distribution infrastructure financed; volume of waste processed; estimated annual energy savings; number of renewable energy technologies financed; number of energy efficiency equipment financed; number of instruments and devices financed for buildings’ energy performance financed; reduction in emissions intensity; and number of zero carbon vehicles .
 - Based on the intent to report both on allocation and impact, Sustainalytics considers this process to be in line with market practice.

Alignment with Green Bond Principles 2021 and Green Loan Principles 2023

Sustainalytics has determined that the Mamoura Diversified Global Holding PJSC Green Finance Framework aligns with the four core components of the GBP and GLP. For detailed information please refer to Appendix 1: Green Bond/Green Bond Programme External Review Form.

¹⁵ As communicated to Sustainalytics by MDGH.

¹⁶ ICMA, “Harmonised Framework for Impact Reporting”, (2023), at: <https://www.icmagroup.org/assets/documents/Sustainable-finance/2023-updates/Handbook-Harmonised-framework-for-impact-reporting-June-2023-220623.pdf>

Section 2: Sustainability Strategy of MDGH PJSC

Contribution to Mamoura Diversified Global Holding PJSC's sustainability strategy

As a state-owned entity and sovereign wealth fund, MDGH follows the UAE government's vision, policy direction, and sustainability commitments, including Environment Vision 2030¹⁷, which includes climate change mitigation objectives, and the UAE Net Zero by 2050 Strategic Initiative.¹⁸ MDGH also commits to sustainability by adopting the strategies of its parent group, Mubadala, namely: i) driving decarbonization across corporate operations; ii) integrating climate into the investment lifecycle; iii) investing in global solutions; and iv) convening the investment community to advance best practices, to achieve net zero GHG emissions across all scopes of the Company's global portfolio and corporate emissions by 2050.¹⁹ Sustainalytics notes MDGH's global portfolio spans various locations, with 48% of its long-term assets present in North America, as well as 18% in the UAE, 11% in Asia and the Pacific region, 9% in Europe, and 14% in other locations.²⁰

Additionally, Mubadala's Responsible Investing (RI) Policy²¹, established in June 2021, is applicable to MDGH²². The policy sets guidance for the Company's group-wide ESG performance measurement, and monitoring and management of investment activities; ESG training for its employees, stakeholder management and ESG-related communications.²³ Based on the Policy, MDGH has engaged its portfolio companies by various ESG-related engagement measures, such as: i) performing TCFD-based climate deep dives; ii) establishing the carbon footprint and decarbonization pathway for multiple UAE-based assets; and iii) supporting portfolio companies in signing up for the UAE Ministry of Climate Change & Environment's Climate-Responsible Companies Pledge.²⁴ As a part of its investment decision making, the Company has also developed a customized tool to estimate carbon footprint and cost-of carbon implications for its new private direct investments.²⁵ In 2020, Mubadala became a member of the One Planet Sovereign Wealth Fund (OPSWF)²⁶ and aligned its RI Policy with the OPSWF initiative to integrate climate change risks and invest in the transition to a low-emissions economy. The initiative highlights clean hydrogen as one of the most important focuses of the OPSWF Network. Mubadala and in turn MDGH also aligns with this focus on clean hydrogen.

Sustainalytics considers it relevant to note that the UAE's economy is becoming more diversified and investments in sustainability initiatives are increasing, but the country remains highly dependent on the fossil fuel industry, with the petroleum sector accounting for nearly 30% of GDP²⁷ and fossil fuel exports contributing 80-84% to government revenues.²⁸ Sustainalytics also notes that the UAE Environment Vision 2030 and Net Zero by 2050 Strategic Initiative lack specific targets to reduce the country's reliance on fossil fuel production. With respect to broad social impact (see Section 2.2 for additional detail), while the UAE has, as described below (see Section 2.2), implemented measures to address social risks such as the protection of human and labour rights^{29,30}, it is noteworthy that such issues continue to be present in the country.³¹

Sustainalytics is of the opinion that the Mamoura Diversified Global Holding PJSC Green Finance Framework is aligned with Mubadala's overall sustainability strategy and initiatives and will further its action on key environmental priorities. Sustainalytics also recognizes MDGH's commitment to support UAE's transition to

¹⁷ Environment Vision 2030, Abu Dhabi, at: <https://u.ae/en/about-the-uae/strategies-initiatives-and-awards/strategies-plans-and-visions/environment-and-energy/environment-vision-2030-abu-dhabi#:~:text=Environment%20Vision%202030%20identifies%20the,and%20conservation%20of%20water%20resources>

¹⁸ Government of UAE, "UAE Net Zero 2050", at: <https://u.ae/en/information-and-services/environment-and-energy/climate-change/theuaesresponsetoclimatechange/uae-net-zero-2050>

¹⁹ Mubadala, "Our Commitment", at: <https://www.mubadala.com/en/responsible-investing>

²⁰ In reference to non-current assets as reported in the Mubadala, 'Mamoura Diversified Global Holding PJSC, Board Of Directors' Report and, Consolidated Financial Statements, 31 December 2022' at: <https://cdn-mubadala.azureedge.net/en/-/media/project/mubadala/reports/en/2022/full-year-2022-consolidated-financial-statements.pdf>

²¹ Mubadala, "Responsible Investment Policy", at: <https://www.mubadala.com/en/-/media/143CC37ABC164772B2CB4AD85B243318.ashx>

²² As communicated to Sustainalytics by MDGH.

²³ Mubadala, "Responsible Investment Policy", at: <https://www.mubadala.com/en/-/media/143CC37ABC164772B2CB4AD85B243318.ashx>

²⁴ Mamoura Diversified Global Holding PJSC Green Finance Framework, at: <https://www.mubadala.com/en/investors/overview>

²⁵ Ibid.

²⁶ One Planet SWFS, "One Planet SWF Network", at: <https://oneplanetwfs.org/>

²⁷ International Trade Administration, "United Arab Emirates- Country Commercial Guide", (2022), at: <https://www.trade.gov/country-commercial-guides/united-arab-emirates-oil-and-gas#:~:text=Hydrocarbons%20continue%20to%20play%20a%20critical%20role%20in,provide%20the%20great%20majority%20of%20UAE%20government%20revenue>

²⁸ Carnegie Endowment for International Peace, "The hurdles of energy transition in Arab states", (2023), at: <https://carnegieendowment.org/2023/05/03/hurdles-of-energy-transitions-in-arab-states-pub-89518>

²⁹ National Human Rights Institution, "Federal Law No. 12", at: <https://www.nhriuae.com/en/law-12>

³⁰ United Arab Emirates Government Portal, "Human Rights in the UAE", at: <https://u.ae/en/about-the-uae/human-rights-in-the-uae>

³¹ Human Rights Watch, "United Arab Emirates", at: <https://www.hrw.org/world-report/2023/country-chapters/united-arab-emirates>

clean energy and achieve the overall goal of achieving net-zero by 2050. To further strengthen its sustainability strategy, Sustainalytics encourages MDGH to publicly disclose its sustainability roadmap and establish quantified, time-bound targets, and report on its progress towards them.

Approach to managing environmental and social risks associated with the projects

Sustainalytics recognizes that the proceeds from the instruments issued under the Framework will be directed towards eligible investments that are expected to have positive environmental impacts. However, Sustainalytics is aware that such eligible investments could also lead to negative environmental and social outcomes. MDGH plays a limited role in the development of projects and assets being financed, but it remains exposed to risks associated with projects in which it may invest. Some key environmental and social risks possibly associated with the eligible investments may include, issues related to emissions, effluents and waste generated in construction, land use and biodiversity issues associated with large-scale infrastructure development; occupational health and safety; human and labour rights; money laundering; and bribery and corruption.

Sustainalytics is of the opinion that MDGH is able to manage or mitigate potential risks through the implementation of the following:

- Mubadala has established a Responsible Investment (RI) Policy³², which is applicable to, and followed by MDGH. The RI Policy addresses key ESG risks associated with MDGH's investment decisions and activities across its investment cycle. The policy constitutes a screening and due diligence process which assesses investee companies' exposure to ESG factors. While the RI Policy does not detail the due diligence process undertaken in the publicly available version of the document, the Framework identifies, among others, the following key ESG considerations as part of the due diligence: i) physical and transition risks of climate change; ii) risks related to waste, emissions and pollution; iii) impact on biodiversity; iv) risks related to child and forced labour in the workforce; v) occupational health and safety; vi) impact on community and indigenous people; vii) supply chain environmental and social impacts; viii) risks related to ethics and compliance, anti-bribery and corruption; and ix) risk control and management systems.³³ The due diligence measures also assess the maturity of investees' policies to address material ESG issues, and their quantitative ESG targets and performance.³⁴
- The RI Policy also underlines communication and reporting measures. There are internal reporting practices in place through which material findings of ESG due-diligence, ongoing deal evaluations and status of ESG investments are presented to relevant internal investment committees.³⁵ Mubadala and in turn MDGH, has in place a due diligence process that involves escalating non-compliance with its ESG policies or severe ESG risks to its senior leadership for appropriate action including developing a risk mitigation plan.³⁶
- Mubadala and in turn MDGH, mandates that all of its investments must comply with the pertinent environmental and social laws of the countries where the investments are situated, including those related to effluent and waste management, biodiversity conservation and protection of labour rights.³⁷ Additionally, MDGH has communicated that it engages independent third-party ESG advisors tasked with identifying international standards and best practice frameworks relevant to the individual investment target, and undertaking ESG due diligence against these. For investments made in Non-Designated Countries under the Equator Principles³⁸, MDGH often collaborates with development financial institutions or Equator Principle Financial Institutions that ensure alignment with the IFC Performance Standards³⁹.
- Given that part of MDGH's financing under the Framework could be allocated to investments in the UAE, Sustainalytics notes that the UAE faces allegations over human and labour rights issues, especially related to migrant workers.⁴⁰ Sustainalytics acknowledges the co-operation between the International Labour Organization and UAE in establishing human rights and labour rights

³² Mubadala, "Responsible Investment Policy", at: <https://www.mubadala.com/en/-/media/143CC37ABC164772B2CB4AD85B243318.ashx>

³³ Mamoura Diversified Global Holding PJSC Green Finance Framework, at: <https://www.mubadala.com/en/investors/overview>

³⁴ As communicated to Sustainalytics by MDGH.

³⁵ Mubadala, "Responsible Investment Policy", at: <https://www.mubadala.com/en/-/media/143CC37ABC164772B2CB4AD85B243318.ashx>

³⁶ As communicated to Sustainalytics by MDGH.

³⁷ Ibid.

³⁸ Equator Principles, "About the Equator Principles", at: <https://equator-principles.com/about-the-equator-principles/>

³⁹ International Financial Corporation, "IFC Performance Standards on Environmental and Social Sustainability", (2012), at:

<https://www.ifc.org/content/dam/ifc/doc/mgrt/ifc-performance-standards.pdf>

⁴⁰ Human Rights Watch, "United Arab Emirates: Events of 2021", at: <https://www.hrw.org/world-report/2022/country-chapters/united-arab-emirates#:~:text=Many%20low%2Dpaid%20migrant%20workers.and%20sexual%20assault%20by%20employers.>

standards.⁴¹ Nonetheless, given the record of such violations in the UAE, Sustainalytics considers this to be an ongoing risk. As noted above, MDGH has established a due diligence process that addresses key ESG risks associated with MDGH's investment decisions and activities across its investment cycle, including human and labour rights.

- MDGH also follows Mubadala's Code of Ethics which covers measures against bribery, money laundering and corruption and excludes any form of terrorist financing. The Code of Ethics sets out detailed guidance on how to prevent improper transactions and to help provide a structure to ensure accurate reporting of all the transactions. MDGH requires all the business partners to adhere to this policy in conjunction with the business code of ethics. The policy further lays out disciplinary actions by MDGH's Ethics & Compliance Office for non-compliance of the policy, such as losing employment.⁴²

Based on these policies, standards and assessments, Sustainalytics is of the opinion that MDGH has implemented adequate measures to manage and mitigate the environmental and social risks related to its investments under the Framework. Nevertheless, Sustainalytics encourages MDGH to improve its disclosures around policies and measures pertaining to human and labour rights, and transparently report on its due diligence efforts and any potential human and labour rights issues or violations found for the investments under this Framework.

Section 3: Impact of Use of Proceeds

All five use of proceeds categories are aligned with those recognized by the GBP and GLP. Sustainalytics has focused on where the impact is specifically relevant in the local context.

Importance of financing green buildings

In 2021, the buildings and construction sector accounted for 34% of global energy demand and was responsible for 37% of global carbon emissions.⁴³ By 2030 direct and indirect CO₂ emissions from the buildings sector need to decline by 50% and 60% respectively to align with the Paris Agreement's 1.5°C scenario.⁴⁴ For the sector to reach net-zero emissions by 2050 under this scenario, all new buildings and nearly 20% of the world's existing building stock would need to be zero-carbon ready⁴⁵ by 2030, and the energy consumed by buildings per square metre would need to decline by approximately 35% by 2030 from a 2022 baseline.^{46,47}

Under its Nationally Determined Contribution, the UAE has committed to reducing the country's GHG emissions by 31% by 2050 compared to 2016 and achieving carbon neutrality.⁴⁸ To reach its targets, the country has developed the National Climate Change Plan of the United Arab Emirates 2017-2050, with key initiatives including: i) establishment of the Etihad Energy Service Company to develop energy-efficiency projects and retrofit buildings, with a target of retrofitting 30,000 buildings by 2030; and ii) launch Estidama, a sustainability programme that focuses on improving the energy efficiency of new buildings in Abu Dhabi, and promoting sustainability ratings for new urban developments in the design, planning and construction phases.⁴⁹

⁴¹ The National, "UAE enhances workplace safety through partnership with international labor organization", (2023), at: <https://www.thenationalnews.com/uae/government/2023/06/19/uae-enhances-workplace-safety-through-partnership-with-international-labor-organization/>

⁴² Mubadala, "Anti Bribery and Corruption Policy", (2021), at: https://cdn-mubadala.azureedge.net/en/-/media/files/who-we-are/about-mubadala/en/mubadala_code_of_ethics-2021-feb2_0.pdf

⁴³ UN Environment Programme, "Global Status Report for Buildings and Construction", (2022), at: https://globalabc.org/sites/default/files/inline-files/2022%20Global%20Status%20Report%20for%20Buildings%20and%20Construction_0.pdf

⁴⁴ UN Environment Programme, "Building sector emissions hit record high, but low-carbon pandemic recovery can help transform sector – UN report", (2020), at: <https://www.unep.org/news-and-stories/press-release/building-sector-emissions-hit-record-high-low-carbon-pandemic>

⁴⁵ The IEA defines zero-carbon-ready buildings as highly energy-efficient and resilient buildings that either use renewable energy directly or rely on a source of energy supply that can be fully decarbonized, such as electricity or district energy. The zero-carbon-ready concept includes operational and embodied emissions. IEA, "Roadmap for Energy-Efficient Buildings and Construction in the Association of Southeast Asian Nations", (2022), at: <https://www.iea.org/reports/roadmap-for-energy-efficient-buildings-and-construction-in-the-association-of-southeast-asian-nations/executive-summary>

⁴⁶ IEA, "Renovation of near 20% of existing building stock to zero-carbon-ready by 2030 is ambitious but necessary", (2022), at: <https://www.iea.org/reports/renovation-of-near-20-of-existing-building-stock-to-zero-carbon-ready-by-2030-is-ambitious-but-necessary>

⁴⁷ IEA, "Buildings", at: <https://www.iea.org/reports/buildings>

⁴⁸ UNCCC, "Updated Second Nationally Determined Contribution of the United Arab Emirates", (2022), at: <https://unfccc.int/documents/613857>

⁴⁹ UAE Ministry of Climate Change & Environment, "National Climate Change Plan of the United Arab Emirates 2017-2050", at: <https://www.moccae.gov.ae/assets/30e58e2e/national-climate-change-plan-for-the-united-arab-emirates-2017-2050.aspx>

Based on the above, Sustainalytics is of the opinion that MDGH's investment in green buildings is expected to contribute to decarbonizing the building stock in the UAE and other countries and contribute to global climate goals.

Importance of facilitating investments towards renewable energy and energy efficiency

Globally, energy-related CO₂ emissions increased by 0.9% or 321 Mt in 2022, reaching a record high of more than 36.8 Gt, 60 Mt CO₂ of which was attributed to cooling and heating demand in extreme weather conditions.⁵⁰ In 2022, the largest increase in emissions originated from the electricity and heat generation sector.⁵¹ In this context, growing the share of renewable energy generation has the potential to have a significant impact on meeting global climate goal. a study by the International Energy Agency and the International Renewable Energy Agency estimates that 65-70% of global primary energy demand would need to be met by low-carbon energy sources by 2050 to align with the 2°C global warming scenario.⁵²

In 2017, the UAE government launched its first unified Energy Strategy 2050 to promote the deployment of renewable energies; enhance energy efficiency; drive research, development and innovation in energy technologies and; encourage investments in the country's renewable and clean energy sector.⁵³ This strategy aims to increase the installed clean energy capacity from 14.2 GW to 19.8 GW, increase the share of installed clean energy capacity in the total energy mix to 30%, reduce the carbon footprint of power generation by 70% and create 50,000 new green jobs by 2030.⁵⁴ The government further aims to invest AED;150 billion (USD 40.8 billion) by 2050 to meet the country's increasing demand for energy.⁵⁵

Regarding energy efficiency, the UAE's National Water and Energy Demand Management Programme targets efficiency measures in the sectors that consume the most energy in the country, including transport, industry and construction. The programme aims to reduce energy demand by 40%, increase renewable energy's contribution to the energy mix to 50% and expand water re-use by 95% by 2050.⁵⁶

Based on the above, Sustainalytics is of the opinion that MDGH's investments in renewable energy and energy efficiency is expected to contribute to achieving global net-zero commitments, including those of the UAE.

Contribution to SDGs

The Sustainable Development Goals were adopted in September 2015 by the United Nations General Assembly and form part of an agenda for achieving sustainable development by 2030. The instruments issued under the Mamoura Diversified Global Holding PJSC Green Finance Framework are expected to help advance the following SDGs and targets:

Use of Proceeds Category	SDG	SDG target
Green Buildings	9. Industry, Innovation and Infrastructure	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all countries taking action in accordance with their respective capabilities
Energy Efficiency	7. Affordable and Clean Energy	7.3 By 2030, double the global rate of improvement in energy efficiency
	9. Industry, Innovation and Infrastructure	9.4 By 2030, upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies and industrial processes, with all

⁵⁰ IEA, "CO₂ emissions in 2022", (2023), at: <https://www.iea.org/reports/co2-emissions-in-2022>

⁵¹ Ibid.

⁵² IEA and IRENA, "Perspectives for the Energy Transition" (2017), at: <https://www.irena.org/publications/2017/Mar/Perspectives-for-the-energy-transition-Investment-needs-for-a-low-carbon-energy-system>

⁵³ Government of UAE, "UAE Energy Strategy 2050", at: <https://u.ae/en/about-the-uae/strategies-initiatives-and-awards/strategies-plans-and-visions/environment-and-energy/uae-energy-strategy-2050>

⁵⁴ Ibid.

⁵⁵ Ibid.

⁵⁶ Government of UAE, "National Water and Energy Demand Management Program", at: <https://u.ae/en/about-the-uae/strategies-initiatives-and-awards/strategies-plans-and-visions/environment-and-energy/national-water-and-energy-demand-management-programme>

		countries taking action in accordance with their respective capabilities
Renewable Energy	7. Affordable and Clean Energy	7.2 By 2030, increase substantially the share of renewable energy in the global energy mix
Pollution Prevention and Control	12. Responsible Consumption and Production	12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse
Clean Transportation	11. Sustainable Cities and Communities	11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

Conclusion

Mamoura Diversified Global Holding PJSC has developed the Mamoura Diversified Global Holding PJSC Green Finance Framework, under which it intends to issue green bonds, private placements, loans, sukuks, medium-term notes and commercial paper and use the proceeds to finance or refinance, in whole or in part, existing or future projects that contribute to the positive environmental impacts globally, in addition to aligning with the decarbonization ambitions of the UAE. Sustainalytics considers that the investments issued under the Framework are expected to provide a positive environmental impact.

Mamoura Diversified Global Holding PJSC Green Finance Framework outlines a process for tracking, allocating and managing proceeds and makes commitments for MDGH to report on its allocation and impact. Sustainalytics believes that the Framework is aligned with the sustainability strategy of MDGH's parent company, Mubadala, and the overall sustainability strategy of the UAE government and that the use of proceeds categories will contribute to the advancement of UN Sustainable Development Goals 7, 9, 11 and 12. Additionally, Sustainalytics is of the opinion that MDGH has adequate measures to identify, manage and mitigate environmental and social risks commonly associated with the eligible investments.

Based on the above, Sustainalytics is confident that the Mamoura Diversified Global Holding PJSC is well positioned to issue green instruments as detailed above and that the Mamoura Diversified Global Holding PJSC Green Finance Framework is robust, transparent and in alignment with the four core components of the Green Bond Principles 2021 and Green Loan Principles 2023.

Appendix

Appendix 1: Green Bond / Green Bond Programme - External Review Form

Section 1. Basic Information

Issuer name:	Mamoura Diversified Global Holding PJSC
Green Bond ISIN or Issuer Green Bond Framework Name, if applicable:	Mamoura Diversified Global Holding PJSC Green Finance Framework
Review provider's name:	Sustainalytics
Completion date of this form:	September 29, 2023
Publication date of review publication:	

Section 2. Review overview

SCOPE OF REVIEW

The review:

- assessed the 4 core components of the Principles (**complete review**) and confirmed the alignment with the GBP/SBP/SBG (*delete where appropriate*).
- assessed only some of them (**partial review**) and confirmed the alignment with the GBP/SBP/SBG (*delete where appropriate*); please indicate which ones:
 - Use of Proceeds
 - Process for Project Evaluation and Selection
 - Management of Proceeds
 - Reporting
- assessed the alignment with other regulations or standards (CBI, EU GBS, ASEAN Green Bond Standard, ISO 14030, etc.); please indicate which ones:

ROLE(S) OF INDEPENDENT REVIEW PROVIDER

- Second Party Opinion
- Certification
- Verification
- Scoring/Rating
- Other (please specify):

Does the review include a sustainability quality score?

- Of the issuer
- Of the project
- Of the Framework
- Other (please specify):
- No scoring

ASSESSMENT OF THE PROJECT(S)**Does the review include:**

- The environmental and/or social features of the type of project(s) intended for the Use of Proceeds?
- The environmental and/or social benefits and impact targeted by the eligible Green and/or Social Project(s) financed by the Green, Social or Sustainability Bond?
- The potentially material environmental and/or social risks associated with the project(s) (where relevant)?

ISSUER'S OVERARCHING OBJECTIVES**Does the review include:**

- An assessment of the issuer's overarching sustainability objectives and strategy, and the policies and/or processes towards their delivery?
- An identification and assessment of environmental, social and governance related risks of adverse impact through the Issuer's [actions] and explanations on how they are managed and mitigated by the issuer?
- A reference to the issuer's relevant regulations, standards, or frameworks for sustainability-related disclosure and reporting?

CLIMATE TRANSITION STRATEGY**Does the review assess:**

- The issuer's climate transition strategy & governance?
- The alignment of both the long-term and short/medium-term targets with the relevant regional, sector, or international climate scenario?
- The credibility of the issuer's climate transition strategy to reach its targets?
- The level/type of independent governance and oversight of the issuer's climate transition strategy (e.g. by independent members of the board, dedicated board sub-committees with relevant expertise, or via the submission of an issuer's climate transition strategy to shareholders' approval).
- If appropriate, the materiality of the planned transition trajectory in the context of the issuers overall business (including the relevant historical datapoints)?
- The alignment of the issuer's proposed strategy and targets with appropriate science-based targets and transition pathways that are deemed necessary to limit climate change to targeted levels?
- The comprehensiveness of the issuer's disclosure to help investors assess its performance holistically?

Overall comment on this section:**Section 3. Detailed review****1. USE OF PROCEEDS****Does the review assess:**

- the environmental/social benefits of the project(s)?
- whether those benefits are quantifiable and meaningful?
- for social projects, whether the target population is properly identified?

Does the review assess if the issuer provides clear information on:

- the estimated proceeds allocation per project category (in case of multiple projects)?

- the estimated share of financing vs. re-financing (and the related lookback period)?

Overall comment on this section:

The eligible categories for the use of proceeds – Green Buildings, Energy Efficiency, Renewable Energy, Pollution Prevention and Control and Clean Transportation – are aligned with those recognized by the Green Bond Principles and the Green Loan Principles. Sustainalytics considers that investments in the eligible categories will lead to positive environmental impacts and advance the UN Sustainable Development Goals, specifically SDGs 7, 9, 11 and 12.

2. PROCESS FOR PROJECT EVALUATION AND SELECTION

Does the review assess:

- whether the eligibility of the project(s) is aligned with official or market-based taxonomies or recognised international standards? Please specify which ones.
- whether the eligible projects are aligned with the overall sustainability strategy of the issuer and/or if the eligible projects are aligned with material ESG-related objectives in the issuer's industry?
- the process and governance to set the eligibility criteria including, if applicable, exclusion criteria?
- the processes by which the issuer identifies and manages perceived social and environmental risks associated with the relevant project(s)?
- any process in place to identify mitigants to known material risks of negative social and/or environmental impacts from the relevant project(s)?

Overall comment on this section:

Mamoura Diversified Global Holding PJSC has established a Green Finance Working Group which will be responsible for reviewing and selecting a green investment portfolio in accordance with the eligibility criteria. The group is chaired by the Executive Director of Treasury and Investor Relations and comprises the heads of relevant internal divisions. Additionally, there are due diligence processes in place that address the environmental and social risks of investments and the activities across their investment cycle. Sustainalytics considers as aligned with market practice.

3. MANAGEMENT OF PROCEEDS

Does the review assess:

- the issuer's policy for segregating or tracking the proceeds in an appropriate manner?
- the intended types of temporary investment instruments for unallocated proceeds?
- Whether an external auditor will verify the internal tracking of the proceeds and the allocation of the funds?

Overall comment on this section:

The Green Finance Working Group is responsible for overseeing and tracking the allocation of proceeds. Mamoura Diversified Global Holding PJSC intends to achieve full allocation of proceeds within 12 months of issuance. Pending full allocation, proceeds will be temporarily held or invested in cash or cash equivalents instruments, or money market funds, at the Working Group's discretion. The Framework may include multi-tranche financing instruments, with tranches being labelled only if the proceeds are allocated as per the eligibility criteria in this Framework. Sustainalytics considers this as aligned with market practice.

4. REPORTING

Does the review assess:

- the expected type of allocation and impact reporting (bond-by-bond or on a portfolio basis)?
- the frequency and the means of disclosure?
- the disclosure of the methodology of the expected or achieved impact of the financed project(s)?

Overall comment on this section:

Mamoura Diversified Global Holding PJSC intends to report annually on the allocation and impact of the proceeds until full allocation on its website. Allocation reporting will include information on an aggregated basis on total allocation per category, unallocated amounts, share of financing versus refinancing and geographical location. Additionally, Mamoura Diversified Global Holding PJSC intends to report on relevant impact metrics. Sustainalytics considers the intent to allocation and impact reporting as aligned with market practice.

Section 4. Additional Information

Useful links (e.g. to the external review provider's methodology or credentials, to the full review, to issuer's documentation, etc.)

Analysis of the contribution of the project(s) to the UN Sustainable Development Goals:

Additional assessment in relation to the issuer/bond framework/eligible project(s):

ABOUT ROLE(S) OF INDEPENDENT REVIEW PROVIDERS AS DEFINED BY THE GBP

- i. **Second-Party Opinion:** An institution with environmental expertise, that is independent from the issuer may issue a Second-Party Opinion. The institution should be independent from the issuer's adviser for its Green Bond framework, or appropriate procedures, such as information barriers, will have been implemented within the institution to ensure the independence of the Second-Party Opinion. It normally entails an assessment of the alignment with the Green Bond Principles. In particular, it can include an assessment of the issuer's overarching objectives, strategy, policy and/or processes relating to environmental sustainability, and an evaluation of the environmental features of the type of projects intended for the Use of Proceeds.
- ii. **Verification:** An issuer can obtain independent verification against a designated set of criteria, typically pertaining to business processes and/or environmental criteria. Verification may focus on alignment with internal or external standards or claims made by the issuer. Also, evaluation of the environmentally sustainable features of underlying assets may be termed verification and may reference external criteria. Assurance or attestation regarding an issuer's internal tracking method for use of proceeds, allocation of funds from Green Bond proceeds, statement of environmental impact or alignment of reporting with the GBP, may also be termed verification.
- iii. **Certification:** An issuer can have its Green Bond or associated Green Bond framework or Use of Proceeds certified against a recognised external green standard or label. A standard or label defines specific criteria, and alignment with such criteria is normally tested by qualified, accredited third parties, which may verify consistency with the certification criteria.
- iv. **Green Bond Scoring/Rating:** An issuer can have its Green Bond, associated Green Bond framework or a key feature such as Use of Proceeds evaluated or assessed by qualified third parties, such as specialised research providers or rating agencies, according to an established scoring/rating methodology. The output may include a focus on environmental performance data, the process relative to the GBP, or another benchmark, such as a 2-degree climate change scenario. Such scoring/rating is distinct from credit ratings, which may nonetheless reflect material environmental risks.

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In case of discrepancies between the English language and translated versions, the English language version shall prevail.

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