

# SECOND PARTY OPINION

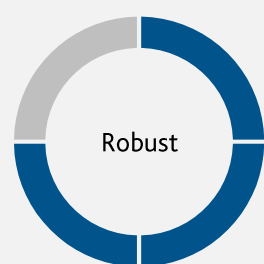
## on the sustainability of the OCP Group's Green Finance Framework

Moody's ESG Solutions considers that the OCP Group's Framework is aligned with the four core components of the ICMA's Green Bond Principles 2021 ("GBP") (with June 2022 Appendix 1), as well as the LMA/APLMA/LSTA's Green Loan Principles – February 2021 ("GLP")



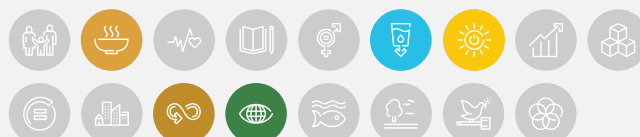
### Framework

#### Contribution to Sustainability :



☐ Advanced
 ☐ Limited
 ☒ Robust
 ☐ Weak

#### SDG Mapping



Weak Limited Robust Advanced

Expected impacts

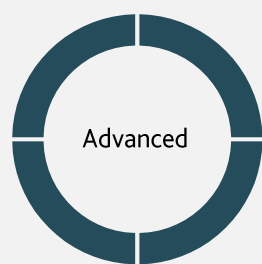
ESG risks management

#### Characteristics of the Framework

Green Project Categories	Six
Project Locations	Morocco
Existence of Framework	Yes
Share of Refinancing	25% maximum
Look-back Period	24 months

### Issuer

#### ESG Performance as of September 2022



☐ Advanced
 ☐ Limited
 ☒ Robust
 ☐ Weak

Weak Limited Robust Advanced

Environment

Social

Governance

#### ESG Controversies

Number of Controversies	Two
Frequency	Isolated
Severity	High
Responsiveness	Remediative

#### Controversial Activities

The Company appears to not be involved in any of the 17 controversial activities screened under our methodology:

- ☐ Alcohol
- ☐ Animal welfare
- ☐ Cannabis
- ☐ Chemicals of concern
- ☐ Civilian firearms
- ☐ Fossil fuels industry
- ☐ Coal
- ☐ Gambling
- ☐ Genetic engineering
- ☐ High interest rate lending
- ☐ Human embryonic stem cells
- ☐ Military
- ☐ Nuclear power
- ☐ Pornography
- ☐ Reproductive medicine
- ☐ Tobacco
- ☐ Unconventional oil and gas

### Coherence

Coherent
Partially coherent
Not coherent

Moody's ESG Solutions considers that the contemplated Framework are coherent with the OCP Group's strategic sustainability priorities and sector issues and that it contributes to achieving the Company's sustainability commitments.

## Key findings

Moody's ESG Solutions considers that the OCP Group's Green Finance Framework is aligned with the four core components of the GBP and GLP.

### Use of Proceeds - aligned with the GBP and GLP, and best practices identified by Moody's ESG Solutions

- The Eligible Categories are clearly defined and detailed. The Issuer has communicated the nature of the expenditures, the eligibility criteria and location of Eligible Projects for all categories.
- The Environmental objectives are clearly defined, relevant and set in coherence with sustainability objectives defined in international standards for all Eligible Categories.
- The Expected Environmental Benefits are clear, relevant and measurable. The benefits will be quantified for all Eligible Categories in the reporting.
- The Issuer has committed to limit the share of refinancing to 25%. The look-back period for refinanced Eligible Projects will be equal to or less than 24 months from the issuance date, in line with good market practices.

### Evaluation and Selection - aligned with the GBP and GLP, and best practices identified by Moody's ESG Solutions

- The Process for Project Evaluation and Selection has been clearly defined and detailed by the Issuer. The process is well-structured in all the evaluation and selection steps (including the proposal, selection, validation and monitoring of Eligible Projects. The roles and responsibilities are clear and include relevant internal expertise, and the process is publicly disclosed in the Second Party Opinion that will be published on the Issuer's website.<sup>1</sup>
- Eligibility criteria for project selection have been clearly defined and detailed by the Issuer for all Eligible Categories, including relevant exclusion criteria.
- The process applied to identify and manage potentially material ESG risks associated with Eligible Projects is publicly disclosed in this Second Party Opinion. The process is considered robust: it combines monitoring, identification and corrective measures, for a majority of the Eligible Categories (see detailed analysis on page 23).

### Management of Proceeds – aligned with the GBP and GLP

- The Process for the Management and Allocation of Proceeds is clearly defined and detailed and is publicly available in the Framework.
- The allocation period will be 36 months or less.
- The net proceeds of the Finance Instruments will be placed in the general account and tracked by the Issuer in an appropriate manner and attested to in a formal internal process.
- Information on the intended types of temporary placement for the balance of the unallocated net proceeds is publicly disclosed.
- The Issuer has committed to periodically adjust the balance of tracked net proceeds to match allocations to Eligible Categories.
- The Issuer has provided information on the procedure that will be applied in case of project divestment or postponement and has committed to reallocate divested proceeds to projects that comply with the Framework within 24 months.

### Reporting - aligned with the with the GBP and GLP

- The Issuer has committed to report on the Use of Proceeds on an annual basis, until full allocation and on a timely basis in case of material developments. The report will be publicly available on the Issuer's website.<sup>2</sup>
- The Issuer has committed to include in the reports relevant information related to the allocation of the Instrument's proceeds and the expected sustainable benefits of the Eligible Project Categories.
- The Issuer has not committed to disclose the methodology and assumptions used to report on environmental benefits of the Eligible Categories.
- An external auditor will verify the tracking and allocation of funds to Eligible Categories until maturity of the financial instrument. The Issuer has not given information on whether indicators used to report on the environmental benefits of Eligible Categories will be verified.

<sup>1</sup> The OCP Group website

<sup>2</sup> The OCP Group website

# SCOPE

Moody's ESG Solutions was commissioned to provide an independent Second Party Opinion ("SPO") on the sustainability credentials and management of the Green Finance Instruments<sup>3</sup> (the "Finance Instruments") to be issued by the OCP Group (the "Issuer") in compliance with the OCP – Green Finance Framework (the "Framework") created to govern their finance instruments).

Our opinion is established according to Moody's ESG Solutions' Environmental, Social and Governance ("ESG") exclusive assessment methodology and to the latest version of the voluntary guidelines of ICMA's Green Bond Principles ("GBP") - edited in June 2021 (with June 2022 Appendix 1), and the LMA/APLMA/LSTA's Green Loan Principles ("GLP") – edited in February 2021.

Our opinion is built on the review of the following components:

- Framework: we assessed the Framework, including the coherence between the Framework and the Issuer's environmental commitments, the Instruments' potential contribution to sustainability and its alignment with the four core components of the GBP 2021 and GLP 2021.
- Issuer<sup>4</sup>: we assessed the Issuer's ESG performance, its management of potential stakeholder-related ESG controversies and its involvement in controversial activities<sup>5</sup>.

Our sources of information are multichannel, combining data (i) gathered from public sources, press content providers and stakeholders, (ii) from Moody's ESG Solutions' exclusive ESG rating database, and (iii) information provided from the Issuer, through documents.

Our opinion and work have been carried out in good faith. Moody's ESG Solutions has not performed any audit, site visit, inspection, nor other tests to establish the accuracy of the information provided by the Issuer. The Issuer is solely responsible for the correctness of the information it has provided and its compliance with, and implementation of, its commitments.

We carried out our due diligence assessment from August 12, 2022 to November 15, 2022. We consider that we were provided access to all documents we solicited. For this purpose, we made reasonable efforts to verify the accuracy of all data used as part of the assessment.

## Contact

Sustainable Finance Team | [clientservices@moodys.com](mailto:clientservices@moodys.com)

## Type of External Reviews supporting this Framework

<input checked="" type="checkbox"/>	Pre-issuance Second Party Opinion	<input type="checkbox"/>	Independent verification of impact reporting
<input checked="" type="checkbox"/>	Independent verification of funds allocation	<input type="checkbox"/>	Climate Bonds Initiative Certification

<sup>3</sup> The "Green Finance Instrument" is to be considered as the bond to be potentially issued, subject to the discretion of the Issuer. The name "Green Finance Instrument" has been decided by the Issuer: it does not imply any opinion from Moody's ESG Solutions.

<sup>4</sup> OCP Group is part of our rating universe - the last ESG rating was performed in July 2021.

<sup>5</sup> The 17 controversial activities screened by us are: Alcohol, Animal welfare, Cannabis, Chemicals of concern, Civilian firearms, Coal, Fossil Fuels industry, Unconventional oil and gas, Gambling, Genetic engineering, Human embryonic stem cells, High interest rate lending, Military, Nuclear Power, Pornography, Reproductive Medicine and Tobacco.

# COHERENCE

Coherent
Partially coherent
Not coherent

We consider that the contemplated Framework is coherent with the OCP Group's strategic sustainability priorities and sector issues, and that it contributes to achieving the Issuer's sustainability commitments.

The fertilizer industry plays a critical role in achieving the UN Sustainable Development Goals (SDGs) with its agricultural products and technology to support sustainable food security. However, the industry's potential contribution towards achieving the SDG2, Zero Hunger, can be partially offset by the environmental impact associated with fertilizers on natural capital, largely due to physical degradation related to mining operations, as well as carbon emissions, waste, water stress and pollution risk.

Synthetic fertilizers are a source of carbon emissions that, according to the Food and Agriculture Organization of the United Nations, accounted for nearly 12% of carbon emissions from agricultural production on average from 1990 to 2016.<sup>6</sup> The industry is taking steps towards curbing global GHG emissions below 1.5°C, the goal of the 2015 Paris Agreement, with some companies already committed to net-zero targets and others that are developing strategies for lower carbon pathways.<sup>7</sup> European Commission's recent "Farm to Fork" proposal, which is at the heart of the European Green Deal to make food systems environmentally friendly, includes a 20% reduction in fertilizer use by 2030 as one of its key objectives.<sup>8</sup>

Morocco is highly exposed to physical climate risk, mainly reflecting the country's water scarcity that is leading to dwindling groundwater reserves and a strong dependence on rain-fed agriculture.<sup>9</sup> The World Resources Institute ranked Morocco among the top 20 countries that will face a significant increase in water stress by 2040.<sup>10</sup> In an effort to strengthen water security across the country, the Moroccan government implemented its "National Water Plan" to invest nearly USD40 billion into the water sector across a subset of programs that include the construction of dams, desalination stations, treating and reusing wastewater.<sup>11</sup> Morocco's CO<sub>2</sub> emissions have more than doubled since 1990 which is largely due to the Moroccan economy's rising energy demand of fossil fuels such as coal, which supplied more than two-thirds of electricity demand in 2020.<sup>12</sup> The government of Morocco has recently strengthened its pledge to the principles of the Paris Agreement with an updated Nationally Determined Contribution (NDC) targeting an unconditional emissions reduction of 18.3% below a business-as-usual (BAU) scenario by 2030.<sup>13</sup> To reach its target, the government has introduced energy reforms including a national energy strategy to reduce energy consumption by 20% compared to a business-as-usual scenario and to reach a share of 52% of renewable energy in installed electric capacity by 2030.<sup>14</sup>

The fertilizer industry's efforts toward improving recycling capabilities and innovations to reduce their carbon footprint can provide long-term contributions towards sustainable agriculture and food security, which would improve human development and social well-being, and more broadly, support the fundamental objectives underlining the UN SDGs.

The OCP Group, a world leader in the production of phosphate rock and phosphate-based fertilizers, plays a vital role in the global food supply chain. The Issuer has embedded its sustainability strategy into its business development strategy and operating model through three core commitments to:

- Responsible and inclusive management
- Sustainable production
- Shared value creation

To achieve the OCP Group's commitment to sustainable production, the Issuer intends to focus its investments on sustainability initiatives, supported by quantifiable objectives, that will address major environmental trends faced by the mining sector while meeting rising global food demand from a growing population.

<sup>6</sup> "5 Questions About Agricultural Emissions," World Resources Institute, July 2019

<sup>7</sup> International Fertilizer Association

<sup>8</sup> "From Farm to Fork: Our food, our health, our planet, our future," European Commission, May 2020

<sup>9</sup> Moody's Credit Opinion: Government of Morocco, July 2022

<sup>10</sup> Ranking the World's Most Water-Stressed Countries in 2040, World Resources Institute

<sup>11</sup> Morocco - Country Commercial Guide, International Trade Administration U.S. Department of Commerce

<sup>12</sup> IEA Morocco Overview

<sup>13</sup> Climate Action Tracker: Morocco

<sup>14</sup> Climate Action Tracker: Morocco

The OCP Group has set a carbon emissions reduction target of 50% by 2030 (vs. a 2014 baseline) and has committed to reaching carbon neutrality by 2040 for its Scope 1, 2 and 3 emissions using science-based targets to align itself with the Paris Agreement. The Issuer is accelerating the trajectory through investments in low-carbon technologies and energy efficiency initiatives to achieve its targets of reducing its energy consumption by 10% and sourcing 100% of its electricity needs from solar and wind power, and cogeneration by 2030. In 2021, the Issuer had already achieved 87% of its clean energy target, accounting for 48% of Morocco's clean electricity production and significantly contributing to the country's decarbonization efforts.

The Issuer has implemented a water program to gain efficiencies through innovations to its water management system and the development of wastewater treatment and desalination capacities, which will support the Issuer's transition to 100% non-conventional water use by 2026. The Issuer has deployed R&D investment to improve the management of phosphate reserves, phosphate use in its fertilizers and rehabilitation of former mining lands. Moreover, the OCP Group has implemented its 4R's framework of Nutrient Stewardship that outlines advanced practices in sustainable agriculture technology through soil mapping, formula development and knowledge sharing of optimal fertilizer use to mitigate environmental impacts.

The OCP Group is a member of several international associations, including the International Fertilizers Association, the World Business Council for Sustainable Development, and is an official supporter of the Task Force on Climate-related Financial Disclosures, defining its commitment towards reporting risks associated with climate change.

# FRAMEWORK

The OCP Group has described the main characteristics of the Finance Instruments within a formalized Green Finance Framework that covers the four core components of the GBP 2021 (with June 2022 Appendix 1), and GLP 2021 (the last updated version was provided to Moody's ESG Solutions on October 31, 2022). The Issuer has committed to make this document publicly accessible on the OCP Group's website,<sup>15</sup> in line with good market practices.

## Alignment with the Green Bond Principles and Green Loan Principles

### Use of Proceeds



The net proceeds of the Finance Instruments will exclusively finance or refinance, in part or in full, projects falling under five green project categories ("Eligible Categories"), as indicated in Table 1.

- The Eligible Categories are clearly defined and detailed. The Issuer has communicated the nature of the expenditures, the eligibility criteria and location of Eligible Projects for all categories.
- The Environmental objectives are clearly defined, relevant and set in coherence with sustainability objectives defined in international standards for all Eligible Categories.
- The Expected Environmental Benefits are clear, relevant and measurable. The benefits will be quantified for all Eligible Categories in the reporting.
- The Issuer has committed to limit the share of refinancing to 25%. The look-back period for refinanced Eligible Projects will be equal to or less than 24 months from the issuance date, in line with good market practices.

#### BEST PRACTICES

- ⇒ The definition and eligibility criteria (selection and exclusion) are clear for all categories.
- ⇒ Relevant environmental benefits are identified and measurable for all categories.
- ⇒ The Issuer has committed to limit the share of refinancing to 25%.
- ⇒ The look-back period for refinanced assets is equal or less than 24 months, in line with good market practices.

<sup>15</sup> [The OCP Group website](#)

Table 1. Our analysis of Eligible Categories, Sustainability Objectives and Expected Benefits as presented in the Issuer Framework

- Nature of expenditures: CAPEX, OPEX and intangible assets (research and innovation)
- Location of Eligible Projects: Morocco

The Framework notes that the projects listed are only examples. Moody's ESG Solutions has limited visibility on the full scope of projects that will be included in this category.

ISSUER FRAMEWORK			INTERNAL DOCUMENTATION AND MOODY'S ESG SOLUTIONS' ANALYSIS	
ELIGIBLE CATEGORIES	ELIGIBLE SUB-CATEGORIES	PROJECTS	SUSTAINABILITY OBJECTIVES AND BENEFITS	MOODY'S ESG SOLUTIONS' ANALYSIS
Reduction of GHG emissions and clean energy	Expenditures related to measures contributing to OCP's carbon neutrality objective via: (i) Direct action of GHG emissions (ii) Investments in production and transmission of electricity / heat from cogeneration and renewable sources (iii) Sourcing of renewables	<ul style="list-style-type: none"> <li>- PV solar plants construction</li> <li>- Green ammonia<sup>16</sup> project</li> <li>- Clean drying systems (using thermal solar energy or green hydrogen)</li> <li>- Co-generation programs (Industrial CHP<sup>17</sup>, including Heat Recovery Systems)</li> <li>- Green Mining Program<sup>18</sup></li> <li>- PCC "In-Pit Crushing and Conveying" integrated system<sup>19</sup></li> <li>- Hydraulic transport of phosphates within mining sites</li> <li>- Production of energy in landmine through Solar farms and Photovoltaic parks</li> </ul>	<u>Climate Change Mitigation</u>  CO <sub>2</sub> emissions reduction	<p>The definition of the category is clear and detailed, and the Issuer has communicated the nature, eligibility criteria and location of eligible expenses.</p> <p>The Issuer has confirmed in internal documentation that:</p> <ul style="list-style-type: none"> <li>• <u>Solar plants</u> will be PV and constructed on site as well as old mining sites.</li> <li>• <u>Green Ammonia</u> will be based on electrolysis, renewable energy with a threshold of &lt;100gCO<sub>2</sub>/kW.</li> <li>• <u>Clean Drying System</u> is an R&amp;D project for phosphate drying using clean energy (solar and green hydrogen).</li> <li>• <u>Co-generation program</u> will be fuelled by the thermal energy from the sulfuric acid production with a threshold of &lt;100gCO<sub>2</sub>/kWIt will also be used in thermoelectric power plants.</li> <li>• The <u>Green Mining Program</u> objective is to decarbonize the extraction and transportation of phosphates. The GHG emissions reduction is targeted at 87%, resulting in 0.2Mt CO<sub>2</sub> per year compared to a business as usual scenario (278kt CO<sub>2</sub> per year) and includes:             <ul style="list-style-type: none"> <li>- Transformation of diesel extraction equipment to electric equipment (drilling machines, excavators and loaders, bulls and pay-dozers, graders, etc.)</li> <li>- Migrating OCP group mining trucks towards green hydrogen trucks</li> <li>- The IPCC "In-Pit Crushing and Conveying" integrated system used inside the extraction mines</li> <li>- Hydraulic transport of phosphates within mining sites</li> </ul> </li> </ul> <p>The expected environmental objectives are relevant and consistent with the objectives defined in international standards.</p> <p>The expected benefits are clear, relevant and measurable for the majority of Eligible Projects. The Issuer has committed to quantify the environmental benefits in its annual report.</p>

<sup>16</sup> Ammonia to be produced from Green Hydrogen (via electrolysis)

<sup>17</sup> Cooling, Heat and Power

<sup>18</sup> This project involves the transformation of diesel extraction equipment to electric equipment (drilling machines, excavators and loaders, Bulls and Pay-dozers, graders) as well as the possibility of migrating OCP group mining trucks towards green hydrogen trucks

<sup>19</sup> System used inside the extraction mines to replace the stripping of primary overburden by loading and transport



ISSUER FRAMEWORK			INTERNAL DOCUMENTATION AND MOODY'S ESG SOLUTIONS' ANALYSIS	
ELIGIBLE CATEGORIES	ELIGIBLE SUB-CATEGORIES	PROJECTS	SUSTAINABILITY OBJECTIVES AND BENEFITS	MOODY'S ESG SOLUTIONS' ANALYSIS
Energy efficiency	Expenditures related to measures aiming to increase energy efficiency in OCP's production process	<ul style="list-style-type: none"> <li>- Digital control tower water / energy</li> <li>- Digital tools to manage energy consumption (e.g., metering systems, control rooms with structured Energy Management Systems and PI vision systems)</li> <li>- Advanced software solutions including turbines, process reactors or the monitoring of hudge equipment.</li> <li>- Logisoft, that deploy all the hardware infrastructure of OCP</li> </ul>	<u>Climate Change Mitigation</u> Energy consumption reduction	<p>The definition of the category is clear and detailed, and the Issuer has communicated the nature, eligibility criteria and location of eligible expenses.</p> <ul style="list-style-type: none"> <li>• The Issuer has confirmed in internal documentation that 30% energy efficiency improvement will be achieved.</li> </ul> <p>The expected environmental objectives are relevant and consistent with the objectives defined in international standards.</p> <p>The expected benefits are clear, relevant and measurable. The Issuer has committed to quantify the environmental benefits in its annual report.</p>
Water stress management	Expenditures related to the improvement of water efficiency and the increase in the use of non-conventional water	<ul style="list-style-type: none"> <li>- Construction of desalination plants (with reverse osmosis)</li> <li>- Construction / expansion of wastewater treatment plants<sup>20</sup></li> <li>- Solutions and digital tools to manage water consumption (e.g., smart sensors)</li> </ul>	<u>Sustainable Water and Wastewater Management</u> Increased water production and treatment capacity  <u>Energy Efficiency</u> Energy consumption reduction	<p>The definition of the category is clear and detailed, and the Issuer has communicated the nature, eligibility criteria and location of eligible expenses.</p> <p>The Issuer has confirmed in internal documentation that:</p> <ul style="list-style-type: none"> <li>• No net GHG emissions or negative net GHG emissions are expected.</li> <li>• Desalination plants will be 100% fuelled by energy produced by the co-generation (thermal energy from sulfuric acid production).</li> <li>• Brine water is diluted and then disposed at the sea (30 million cubic meters of brine into 2 billion cubic meter of ocean water). Minimum recovery ratio is 50%</li> <li>• Energy consumption of the desalination plants is between 3.2 and 4.2 kWh/M<sup>3</sup>.</li> <li>• The net average energy consumption of wastewater treatment plants is between 1.4 and 1.6kwh.</li> <li>• 20% decrease in energy consumption is expected for wastewater.</li> </ul> <p>The expected environmental objectives are relevant and consistent with the objectives defined in international standards.</p> <p>The expected benefits are clear, relevant and measurable. The Issuer has committed to quantify the environmental benefits in its annual report.</p>

<sup>20</sup> Activated pludge in addition to thermohydrolysis process for sludge treatment





ISSUER FRAMEWORK			INTERNAL DOCUMENTATION AND MOODY'S ESG SOLUTIONS' ANALYSIS	
ELIGIBLE CATEGORIES	ELIGIBLE SUB-CATEGORIES	PROJECTS	SUSTAINABILITY OBJECTIVES AND BENEFITS	MOODY'S ESG SOLUTIONS' ANALYSIS
Clean tech & eco-efficient innovation	Expenditures related to the R&D of new technologies aiming at improving OCP's Green targets	<ul style="list-style-type: none"> <li>- Digitalized Smart PV plant</li> <li>- ECOWAVE system in Laayoune Port</li> <li>- Solar desalination in Phosboucraa (via reverse osmosis)</li> </ul>	<u>Climate Change Mitigation</u> Increase in renewable energy capacity GHG emissions reduction  <u>Sustainable Water and Wastewater Management</u> Increased water production and treatment capacity	<p>The definition of the category is clear and detailed, and the Issuer has communicated the nature, eligibility criteria and location of eligible expenses.</p> <p>The expected environmental objectives are relevant and consistent with the objectives defined in international standards.</p> <p>The expected benefits are clear, relevant and measurable. The Issuer has committed to quantify the environmental benefits in its annual report.</p>
Soil health and sustainable agriculture	Expenditures related to the development of sustainable input products and capability-building programs for sustainable farming practices	<ul style="list-style-type: none"> <li>- Soil mapping programs</li> <li>- Development of geospatial technologies (incl. satellite imagery, remote sensing, geospatial data, digital soil mapping and yield forecasts) for developing nutrient management platforms</li> <li>- Development of new bio products (e.g., organomineral fertilizers, fertilizers with meso- and micronutrients)</li> </ul>	<u>Environmentally Sustainable Management of Living Natural Resources and Land Use</u> Environmentally sustainable agriculture  <u>Pollution Prevention and Control</u> Reduction in soil pollution	<p>The definition of the category is clear and detailed, and the Issuer has communicated the nature, eligibility criteria, target population and location of eligible expenses.</p> <p>The Issuer has confirmed in internal documentation that:</p> <ul style="list-style-type: none"> <li>• Training on regenerative agriculture practices will provide capacity for farmers to use the customized fertilizers using the 4R methodology<sup>21</sup></li> <li>• Customized fertilizers are phosphorous (P) based ones that contain macro elements (N, P, K, S), but also mesonutrients (MgO, CaO) and micronutrients such as Fe, Zn, Cu, or B, all of which are necessary for the plant cycle.</li> <li>• Target population: Aggregators that interface with smallholder farmers, which are farmers with less than 5ha from which a majority has less than 1ha of land.</li> </ul> <p>The expected environmental and social objectives are relevant and consistent with the objectives defined in international standards.</p> <p>The expected benefits are clear, relevant and measurable. The Issuer has undertaken to quantify the environmental benefits in its annual report.</p>
		<ul style="list-style-type: none"> <li>- Trainings on regenerative agriculture practices to teach the most sustainable use of customized fertilizers, targeting aggregators that interface with smallholder farmers</li> </ul>	<u>Food security and sustainable food systems</u> Capacity building of farmers	

<sup>21</sup> <https://ocpsiteprodsa.blob.core.windows.net/media/2022-08/OCP%20GROUP%20INTEGRATED%20REPORT%202021.pdf>

## SDG Contribution

The Eligible Categories are likely to contribute to five of the United Nations' Sustainable Development Goals ("SDGs"), namely:

ELIGIBLE CATEGORY	SDG	SDG TARGETS
Soil health and sustainable agriculture	 2 Zero Hunger	2.4 By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.
Water stress management Clean tech & eco-efficient innovation	 6 Clean Water and Sanitation	6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally. 6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity. 6.5 By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate.
Reduction of GHG emissions and clean energy		7.2 By 2030, increase substantially the share of renewable energy in the global energy mix.
Energy efficiency	 7 Affordable and Clean Energy	7.3 By 2030, double the global rate of improvement in energy efficiency.
Clean tech & eco-efficient innovation		7a By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology.
Soil health and sustainable agriculture Pollution prevention and control Water stress management	 12 Responsible Consumption and Production	12.2 By 2030, achieve the sustainable management and efficient use of natural resources. 12.3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses. 12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment. 12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.
Reduction of GHG emissions and clean energy Pollution prevention and control Clean tech & eco-efficient innovation	 13 Climate Action	13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

## Evaluation and Selection of Eligible Projects



- The Process for Project Evaluation and Selection has been clearly defined and detailed by the Issuer. The process is well-structured in all the evaluation and selection steps (including the proposal, selection, validation and monitoring of Eligible Projects. The roles and responsibilities are clear and include relevant internal expertise, and the process is publicly disclosed in the Second Party Opinion that will be published on the Issuer's website.<sup>22</sup>
- Eligibility criteria for project selection have been clearly defined and detailed by the Issuer for all Eligible Categories, including relevant exclusion criteria.
- The process applied to identify and manage potentially material ESG risks associated with Eligible Projects is publicly disclosed in this Second Party Opinion. The process is considered robust: it combines monitoring, identification and corrective measures, for a majority of the Eligible Categories (see detailed analysis on page 23).

### Process for Project Evaluation and Selection

- For the purpose of the Finance Instruments, the project evaluation and selection process will be a collaboration among:
  - The Sustainability Platform, which is responsible for developing OCP's global sustainability and ESG strategies and ensuring their implementation across the Group
  - The Green Industrial Development team, within each Business Unit, which oversees designing and proposing specific green projects
  - The Chief Financial Officer
- The process for selecting the Eligible Projects to be included in the Green Finance Instruments is as follows:
  - (i) The Business Units propose potential green projects to the Sustainability Platform and Finance Office, both at the centralized corporate level.
  - (ii) The Sustainability Platform will assess the eligibility and alignment of the Business Unit's proposed projects to Green Eligible Project criteria established in this Framework.
  - (iii) The Finance Office will review the eligible projects and determine the most adequate financing sources (Green Bond or other types of sources), then consolidate a final list of Eligible Projects to be financed through the Green Finance Instrument's proceeds.
  - (iv) The final list of Eligible Projects will then be approved at the CFO level.
  - (v) Following approval, the Finance Office will be responsible for monitoring the allocation of proceeds to the specific projects, while the Sustainability Platform will guarantee the continuous alignment of the list of projects with OCP's Green Finance Framework.
- The Sustainability Platform will monitor the Eligible Projects portfolio during the lifetime of the Finance Instruments and will remove a project that no longer meets the eligibility criteria. The Sustainability Platform will also be responsible for replacing an Eligible Project if it no longer meets the eligibility criteria and upgrading the Framework.
- The traceability and verification of the selection and evaluation of the projects is ensured throughout the process:
  - The Issuer reports that it will annually monitor the compliance of selected and financed projects with the eligibility criteria specified in the Framework throughout the life of the instrument and has provided details on the procedure adopted in case of non-compliance.
  - The Issuer reports that it will annually monitor potential ESG controversies associated with financed projects throughout the life of the instrument. However, no information has been provided on actions to be taken in case a controversy is found.
  - OCP will ensure the traceability of the decision-making process, through internal archiving meeting minutes and assessment exercise conclusions (for internal use only not to be published).

<sup>22</sup> The OCP Group website

### Eligibility Criteria

The process relies on explicit eligibility criteria (selection and exclusion), relevant to the environmental objectives defined for the Eligible Categories.

- The selection criteria are based on the definitions in the Eligible Categories defined Table 1 in the Use of Proceeds section.
- The Issuer commits to excluding from its framework any expenditures that will have detrimental social and environmental effects, such as expenditures related to electricity generation plants that do not respect a maximum carbon intensity threshold, any activity that is considered illegal according to national laws and regulations or international agreements and conventions, deforestation, degradation of maritime ecosystem, and any activity that is responsible for production of toxic emissions.

### BEST PRACTICES

- ⇒ Eligibility (selection and exclusion) criteria for Project selection are clearly defined and detailed for all of the Eligible Categories.
- ⇒ The Issuer reports that it will monitor compliance of selected and financed Projects with eligibility criteria specified in the Framework throughout the life of the instrument and has provided details on the procedure adopted in case of non-compliance.

## Management of Proceeds



- The Process for the Management and Allocation of Proceeds is clearly defined and detailed and is publicly available in the Framework.
- The allocation period will be 36 months or less.
- The net proceeds of the Finance Instruments will be placed in the general account and tracked by the Issuer in an appropriate manner and attested to in a formal internal process.
- Information on the intended types of temporary placement for the balance of the unallocated net proceeds is publicly disclosed.
- The Issuer has committed to periodically adjust the balance of tracked net proceeds to match allocations to Eligible Categories.
- The Issuer has provided information on the procedure that will be applied in case of project divestment or postponement and has committed to reallocate divested proceeds to projects that comply with the Framework within 24 months.

## Management Process

- The net proceeds of the Finance Instruments will be credited to the Issuer's general treasury account. The Finance Office will be responsible for tracking the proceeds and will manage the allocation of an amount equivalent to the net proceeds of its Green Finance Instruments to expenditures related to Eligible Green Projects.
- OCP will strive to achieve a level of allocation to the Eligible Project portfolio that matches or exceeds the balance of net proceeds out of its outstanding Green Finance Instruments.
- Pending full allocation of an amount equal to the net proceeds of outstanding Green Finance Instruments, the proceeds will be held in temporary investments such as cash, cash equivalents and/or other liquid marketable investments in line with OCP's treasury management policies. Any temporarily non-allocated funds will be excluded from being placed in investments that finance GHG intensive activities, controversial activities or bank accounts with inappropriate environmental or SRI management policy.
- In the event of postponement or divestment of an Eligible Green Project, OCP commits to reallocating the proceeds to other Eligible Projects within 24 months.

An Area for improvement includes:

- An area for improvement would be to commit that, as long as the financial instrument is outstanding, the balance of the tracked net proceeds will be periodically adjusted to match allocations to Eligible Categories made during that period.

### BEST PRACTICES

- ⇒ The Issuer has committed not to invest temporarily unallocated net proceeds in GHG intensive activities or controversial activities.
- ⇒ The Issuer has provided information on the procedure that will be applied in case of project divestment or postponement, and it has committed to reallocate divested proceeds to projects that are compliant with the Framework within 24 months.

## Reporting

Not Aligned	Partially Aligned	Aligned	Best Practices
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- The Issuer has committed to report on the Use of Proceeds on an annual basis, until full allocation and on a timely basis in case of material developments. The report will be publicly available on the Issuer's website.<sup>23</sup>
- The Issuer has committed to include in the reports relevant information related to the allocation of the Instrument's proceeds and the expected sustainable benefits of the Eligible Project Categories.
- The Issuer has not committed to disclose the methodology and assumptions used to report on environmental benefits of the Eligible Categories.
- An external auditor will verify the tracking and allocation of funds to Eligible Categories until maturity of the financial instrument. The Issuer has not given information on whether indicators used to report on the environmental benefits of Eligible Categories will be verified.

## Indicators

The Issuer has committed to transparently communicate at Eligible Category level, on:

- Allocation of proceeds: The indicators selected by the Issuer to report on the allocation of proceeds are relevant and exhaustive.

### REPORTING INDICATORS

- ⇒ Net proceeds of outstanding Green Finance Instruments
- ⇒ Amount of net proceeds allocated to Eligible Project Categories as defined in the Use of Proceeds section of this Framework
- ⇒ The proportion of financing vs refinancing (% of net proceeds)
- ⇒ The remaining balance of unallocated proceeds, if any, and their placements and uses
- ⇒ The share of co-financing for Eligible Projects

- Environmental benefits: The indicators selected by the Issuer to report on the environmental benefits are relevant.

ELIGIBLE CATEGORIES	ENVIRONMENTAL BENEFITS INDICATORS	
	OUTPUTS AND OUTCOMES	IMPACT INDICATORS
Reduction of GHG emissions and Clean Energy	<ul style="list-style-type: none"> <li>• Total energy production and consumption by sources (TJ)</li> </ul>	<ul style="list-style-type: none"> <li>• Evolution of GHG emissions (Scope 1, 2 and 3 – Mt CO<sub>2</sub> eq, T CO<sub>2</sub>/M\$)</li> <li>• Carbon footprint (Mt CO<sub>2</sub> eq)</li> <li>• Energy mix (in %)</li> </ul>
Energy efficiency	<ul style="list-style-type: none"> <li>• Total energy production and consumption by sources (TJ)</li> <li>• Energy intensity (GJ/t P2O5)</li> </ul>	<ul style="list-style-type: none"> <li>• Reduction in energy consumption (% from the baseline)</li> </ul>
Pollution Prevention and Control	<ul style="list-style-type: none"> <li>• Share of diesel extraction equipment transitioned to electric equipment (% of total stock)</li> <li>• Share of mining trucks migrated towards green hydrogen trucks (% of total stock)</li> </ul>	<ul style="list-style-type: none"> <li>• Pollution reduction (%)</li> <li>• GHG emissions reduction</li> </ul>

<sup>23</sup> The OCP Group website

ELIGIBLE CATEGORIES	ENVIRONMENTAL BENEFITS INDICATORS	
	OUTPUTS AND OUTCOMES	IMPACT INDICATORS
Water stress management	<ul style="list-style-type: none"> <li>Water withdrawal from all areas (Megaliters)</li> </ul>	<ul style="list-style-type: none"> <li>Amount of unconventional water produced</li> <li>Reduction in energy consumption (%)</li> <li>Water intensity, conventional and non-conventional (m3/ Equi. P2O5 and m3/k\$)</li> </ul>
Clean tech & eco-efficient innovation	<ul style="list-style-type: none"> <li>Qualitative – status of project</li> </ul>	<ul style="list-style-type: none"> <li>CO<sub>2</sub> offsetting /reducing potential from clean tech (t CO<sub>2</sub> eq.)</li> </ul>
Soil health and sustainable agriculture	Environmental indicators: <ul style="list-style-type: none"> <li>Evolution of the number of fertilizers formulas that respond to soil needs</li> <li>Number of soil analysis</li> <li>Areas of soil mapped (in ha)</li> </ul>	Environmental indicators: <ul style="list-style-type: none"> <li>Increase in agricultural yields with customized fertilizers (%)</li> </ul>
	Social indicator: <ul style="list-style-type: none"> <li>Number of trainings and demonstrations platforms</li> </ul>	

Areas for improvement include:

- Committing to disclose the methodology and assumptions used to report on environmental benefits of the Eligible Projects at least to investors-bondholders.
- Committing to an external verification of the indicators used to report on environmental benefits of the Eligible Projects.

#### BEST PRACTICES

- ⇒ The Issuer report will be publicly available.
- ⇒ The indicators selected by the Issuer are exhaustive with regards to allocation reporting.



# CONTRIBUTION TO SUSTAINABILITY

## Expected Impacts

The potential positive Impact of the eligible projects on environmental objectives is considered to be robust.

ELIGIBLE CATEGORY	EXPECTED IMPACT	ANALYSIS
Reduction of GHG emissions and clean energy	ROBUST	<p>An input of phosphorus fertilizer is crucial in today's agricultural process and its shortfall will result in shortfall of crop yield. Given that OCP is responsible for 70% of reserves in the world, OCP has a responsibility to reduce GHG emission resulting from the phosphorus production.</p> <p>Phosphate is an energy intensive process that emits sulphur dioxide emissions, fluorine, ammoniac, hydrogen sulphur, and particulate matters (dust), from their mining and processing process. Ammonia, which is used for the phosphate production process, currently accounts for more than 1% of global CO<sub>2</sub> emissions. According to OCP, 87% of OCP's energy needs are covered by co-generation and wind energy. In addition, 48% of Morocco's clean energy is produced by OCP.</p> <p>Below are projects included under this category which will attempt to mitigate the pollution from the energy use and increase clean energy required for the mining and production process.</p> <p><u>Solar Plants with PV technology</u> will be constructed on ground as well as at old mining sites. It will contribute to a clean production process while Clean Drying System project will finance R&amp;D for solar drying system which will contribute to reducing the 12% of CO<sub>2</sub> emissions resulting from the drying of phosphates using industrial fuel and natural gas. It will attempt to optimize the production of heat based on Thermal solar energy (CSP) as well as Green Hydrogen and expected to make 1.3MtCO<sub>2</sub>/Year of energy reduction compared to fossil fuel based drying system. The solar PV plants will operate as self-consumption mode, meaning the energy produced will be internally transmitted to the consumption points of the mining sites.</p> <p><u>Co-generation / CHP</u> (combined heat and power) consists of the recovery of the thermal energy released during the process of production of sulfuric acid in order to transform it into electrical energy. Thermoelectric power plants are also equipped with an HRS (Heat Recovery System) system that optimizes power generation. OCP has demonstrated that co-generation of thermal energy resulting from the production of sulfuric acid has led to 2,17MtCO<sub>2</sub> eq avoided per year. Furthermore, a commitment is made to limit the life cycle GHG of co-generation lower than 100gCO<sub>2</sub>e per 1 kWh of energy output from the combined generation. In addition, OCP confirmed that they don't have gas or coal power plants in their facilities. The HRS (Heat Recovery System) is implemented only in the thermoelectric power plant to optimize the yield of the recovery of heat from the cogeneration process and hence the increase of electricity generation.</p> <p>Co-generation will continue to be an important source of clean energy as OCP plans to specifically rely on both cogeneration and wind energy to achieve their goal of 100% clean energy by 2030.<sup>24</sup>, OCP implemented specific measures to minimize pollution. Specifically, SO<sub>2</sub> and SO<sub>3</sub>, considered the principal pollutants of the Sulphuric Acid production, is captured at a rate of 99.5% and 100% respectively. To put this into context, OCP's level of SO<sub>2</sub> and SO<sub>3</sub> emission is 10 times less than the threshold set by World Bank's which is 160PPM. Acidification concerns are limited as mist eliminators are equipped to prevent the acid entrained by gas from being released into the atmosphere. Furthermore, there is no GHG emission released as the combustion process is through mixture of Sulphur and water.</p> <p><u>Green Ammonia</u>: Phosphate fertilizers are produced by combining phosphorous rock with sulfuric acid to produce phosphoric acid, which in turn is processed with ammonia to produce fertilizers. Today, ammonia production accounts for more than 1% of global CO<sub>2</sub> emissions and in 2021, 1.83 million metric tons of non-renewable ammonia was consumed. Substitution of fossil fuel with renewable energy to produce ammonia is essential for the supply of fertilizer facilities. This project will produce green ammonia based on green hydrogen produced through electrolysis</p>

<sup>24</sup>OCP Sustainability Integrated Report

ELIGIBLE CATEGORY	EXPECTED IMPACT	ANALYSIS
		<p>using electricity from solar and wind capacities. In partnership with UM6P, it will also refinance and expand on the construction of two pilot units for a total CAPEX of around 61,11 million dollars.</p> <p>By 2030, OCP estimates 1.3 MtCO<sub>2</sub>/year of CO<sub>2</sub> reduction from the drying of phosphates using solar energy. The industrial fuel and natural gas based drying of phosphates represents about 12% of the OCP Group's carbon balance (in 2021 490ktCO<sub>2</sub>/Year) and the solar drying will contribute to carbon offset of 1,8M tCO<sub>2</sub> annually by 2026. Production of green ammonia will facilitate the reduction of scope 3 emission with its clean energy-based electrolysis process. Although a reduction in emission will be achieved for the Sulfuric acid production as a result of co-generation, OCP's perpetual reliance on continuous production of sulfuric acid for co-generation creates a lock-in effect. Renewable energy fuelled production, recycling of phosphates from sewage and used fertilizers are some of the alternatives that could reduce the demand for Sulphuric Acid in phosphate rock processing for fertilizer production.<sup>25</sup></p> <p>While acknowledging the clear benefits that green ammonia and solar energy brings to achieving the carbon neutrality, the absence of clear decarbonization strategy for sulfuric acid production could perpetuate, delay or prevent the transition to low-carbon alternatives.</p> <p><u>Green Mining Program:</u> The eligible category will engage in projects to facilitate the decarbonation of extraction and transportation during the phosphate mining process.</p> <p>Conversion of mining trucks to green hydrogen trucks is the first project which will be produced by solar PV energy and electrolysis. Refuelling stations will also be constructed as part of the project. This project will facilitate the reduction of carbon dioxide emission and lower the cost of transporting phosphates by replacing diesel trucks and reducing the energy consumption. R&amp;D will be carried out to study the feasibility of incorporating IPCC (In-Pit Crushing and Conveying) integrated system which is used for the extraction mines and holds a potential to replace the stripping of primary overburden by loading and transport thereby ultimately lowering the operating cost of mining and its carbon footprint.</p> <p>The last project is the hydraulic transport of phosphates within mining sites which will reduce carbon dioxide emissions. Hydraulic transport will make it possible to lower the cost of transporting phosphates by replacing diesel trucks and reducing our energy consumption</p> <p>Other electrification of equipment under the eligible category, will also include drilling machines, excavators and loaders, Bulls and Pay-dozers, graders. OCP will determine the appropriate mix of solutions for each mine in order to ensure decarbonization.</p> <p>Due to the lack of quantified emission reduction as well as the share of equipment and process to be decarbonized, the degree to which the category will contribute to pollution reduction remains unclear. With that being said, the eligible projects will contribute to facilitating the decarbonization of the extraction and transportation of phosphates to a certain degree.</p>
Energy efficiency	ROBUST	<p>Eligible projects under this category include technological solutions to improve the energy efficiency of the phosphate processing. To date, 52% of OCP's energy consumption comes from processing and 47% from extraction.</p> <p>Digital solutions will be incorporated to improve the efficiency of energy used for the processing and production process. Several investments have been made including creating an equipment control rooms with PI Vision systems, metering systems for energy resources, sensors for several utilities. The control tower consolidates flows from several control systems, which already optimize the use of energy resources in their micro perimeters. The consolidation of flows at tower level allows a global monitoring that helps to identify, at the macro level of the industrial site or platform, different new modes of operation or configurations that can optimize the sharing of resources, including energy, to further improve the energy performance of the entire site.</p> <p>Combined with the developing software solutions and advanced analytics to drive industrial processes and enhance their energy performance, these projects are expected to deliver a 30% energy efficiency improvement compared to baseline technologies.</p>

<sup>25</sup> <https://pubs.rsc.org/en/content/articlelanding/2015/gc/c4gc02445a>

ELIGIBLE CATEGORY	EXPECTED IMPACT	ANALYSIS
		<p>Other technologies to improve the efficiency are advanced software solutions including turbines, process reactors or the monitoring of hedge equipment, licenses of PI vision, a digital solution of Logisoft, that deploy all the hardware infrastructure of OPM<sup>26</sup>, in terms of OPC servers and Historians, to pilot all the process parameters that impact and influence the energy performance.</p> <p>All the assets that have the production process or material flows are concerned by PI system and the challenge of Energy improvement, e.g., Steam, sulfuric plants, power plants, phosphoric acid plants, fertilizers plants, phosphate washing plants, drying plants, slurry Pipeline, Desalination plants...</p> <p>This category of projects will contribute to OCP's targets to achieve 10% energy efficiency by 2030 compared to a 2019 baseline (in terms of energy intensity per tons of products).</p>
Water stress management	ROBUST	<p>In Morocco, higher average temperatures coupled with extreme, less predictable weather conditions are exacerbating the water stress of the country where the phosphorus mining and processing takes place. For these reasons, non-conventional water production as well as wastewater treatment is necessary in order to satisfy the growing phosphorus demand.</p> <p>To date, OCP produces 36 million cubic meters of water through desalination and municipal wastewater treatment, which represents 30% of their needs. Projects of this category include desalination and waste-water treatment which are initiatives to decrease reliance on natural water sources while efficiently managing waste. Desalination plant is constructed in Morocco with capacity of between 60,000 m<sup>3</sup>/day and 130,000 m<sup>3</sup>/day with a target of 170Mm<sup>3</sup>/year. Based on energy consumption of 3.2 and 4.2 kWh/m<sup>3</sup> and Reverse Osmosis process, the plant uses more than 2Mm<sup>3</sup>/day of sea water for cooling of Brine discharge in order to prevent destruction of marine eco-system. The brine is injected and diluted into the water-cooling system before its release and expected to prevent negative impact as supported by scientific research.<sup>27</sup> Furthermore, 50% recovery of Brine is expected, and the plant will be 100% powered by clean energy produced by OCP (Co-Generation from Sulfuric Acid production). OCP reports that Sulphuric Acid's scope 1 and 2 emission is limited due to co-generation but scope 3 from sulphur suppliers and the upstream transportation is estimated at 1.09 MT CO<sub>2</sub> Eq in 2021.</p> <p>Typically, a traditional seawater RO requires 2.5-4 kWh/m<sup>3</sup> and gaseous emissions from desalination stacks include carbon monoxide (CO), nitric oxide (NO), nitrogen dioxide (NO<sub>2</sub>), and sulphur dioxide (SO<sub>2</sub>).<sup>28 29</sup> Furthermore, RO membranes are susceptible to fouling and scaling, which results in toxic chemical discharge into waters due to the cleaning chemicals. Renub Research valued the desalination market size was at USD 19.29 Billion in 2021 and projects it to be USD 32.02 Billion by 2027.<sup>30</sup> By virtue of this expected growth and scale, it is critically important that the production of water does not lead to lock in effect that perpetuates adverse environmental outcomes. As explained in the GHG Reduction eligible category, specific measures are implemented to minimize pollutants released from the Sulphuric Acid production process including SO<sub>2</sub>, SO<sub>3</sub> as well as acidification. Furthermore, there is no GHG emission released as the combustion process through mixture of Sulphur and water.</p> <p>Regarding the energy source for the desalination plant, OCP has commitments to implement solar energy once the current development phase is completed. In terms of the technology, RO is considered the second-best technology after MSG/MED which is capable of decreasing the concentration of diluted brine the most.<sup>31, 32</sup> Although concerns remain about the potential lock in effect due to the desalination plants 100% reliance on co-generation, the aforementioned measures ensure the limited environmental damage.</p> <p>Wastewater treatment plant will have an average energy consumption of which can vary between 1.4 and 1.6kwh and managed through Thermohydrolysis process, in addition to sludge treatment. OCP targets a 20% reduction of energy consumption by partially incorporating biogas. Finally, smart sensors digital solution will be</p>

<sup>26</sup> OCP's Production Monitoring, real time monitoring system for the production process

<sup>27 41</sup> Investigating sustainable management of desalination brine through concentration using forward osmosis," El Zayat, H., Nasr, P. & Sewilam, H., March 2021

<sup>28</sup> Environmental Issues of Desalination, Tamim Younos, Journal of Contemporary Water Research & Education, December 2005

<sup>29</sup> <https://www.energy.gov/sites/default/files/2019/09/f66/73355-7.pdf>

<sup>30</sup> Desalination Market, Size, Global Forecast 2022-2027, Industry Trends, Growth, Insight, Impact of COVID-19, Opportunity Company Analysis, Renub Research, February 2022

<sup>31</sup> Environmental Issues of Desalination, Tamim Younos, Journal of Contemporary Wwater Research & Education, December 2005

<sup>32</sup> Multi-effect Distillation (MED), Raphael Semiat

ELIGIBLE CATEGORY	EXPECTED IMPACT	ANALYSIS
		<p>incorporated to track live water consumption data in order to improve and manage water consumption.</p> <p>On the balance of the information presented, we consider the management of externalities for the desalination plant to be sufficient while acknowledging that there is room for improvement in terms of technology and energy source. Adopting the BAT as well as incorporating solar energy to fuel the plant are important advancements to ensure the supply of essential water to the community while avoiding any significant harm to the environment.</p> <p>This eligible category will contribute to OCP's 2026 goal of achieving 100% of OCP's water use with non-traditional sources and its environmental contribution is considered to be robust.</p>
Clean tech & eco-efficient innovation	ADVANCED	<p>87% of OCP's energy needs are covered by co-generation as well as wind energy and plans are in place to achieve carbon neutrality by 2040.</p> <p>OCP is targeting Solar energy to play a crucial role in increasing the share of clean energy to achieve this goal. However, the intermittent nature remains a hurdle to fully implementing it on a large scale to scale the production. Digitalized smart PV will help tackle this issue and other source of clean energy including ocean will diversify the source of energy in the near future.</p> <p>This category will exclusively finance R&amp;D of new technologies aiming at achieving OCP's Green targets. Under the Green Target, OCP plans to satisfy 100% OCP's energy needs with clean energy by 2030. In order to achieve this, the first project is the Digitalized Smart PV Plant project which aims to develop a proactive and predictive advanced anomaly detection system based on artificial intelligence to implement it within the future Benguerir solar power plant. It will improve the efficiency of solar plants, improve the intermittent nature of solar energy and lower the maintenance cost.</p> <p><u>Eco wave project</u> concerns R&amp;D projects to optimize ocean wave to create renewable energy. In order to compensate for the harsh climate and variable waves, R&amp;D will be conducted to optimize this solution for future use. One of the key challenges will be to mitigate the negative environmental impact due to the requirement of mooring to the ocean floor, which disturbs local marine habitats and potentially impedes marine migration.</p> <p><u>Solar desalination project</u> involves R&amp;D and installation of two solar desalination systems for brackish water in Phosboucraa. The objective is to validate the potential of solar desalination as an alternative solution with low cost and environmental impact, to cope with water stress in landlocked regions with brackish underground resources.</p> <p>Enabling reliable renewable energy as well as incorporating renewable energy in the desalination process will contribute to OCP achieving net neutrality by 2040.</p>
Soil health and sustainable agriculture	ADVANCED	<p>Inappropriate or poor management of land use leads to a decline in productivity, soil erosion, salinization and loss of vegetation. Africa is experiencing severe degradation of soil since the traditional methods used by farmers cannot cope with the increasing population and associated livestock requirement.</p> <p>This eligible category sets out to achieve sustainable farming, bridging any nutrient gaps for optimal plant growth while maximizing environmental benefits.</p> <p><u>Soil mapping programs</u> allow farmers to increase yields while using less unnecessary fertilizers. This is enabled through identification of the best area to produce the best outcomes for a particular crop, number of seed to sow in each specific area according to the soil type characteristics, how much water to give the crop and what nutrients the soil will need to achieve the best crop outcomes. It is a use of geospatial techniques for mapping soils and can illustrate the spatial distribution of soil classes or properties and can document the uncertainty of the soil prediction. Difference between digital soil mapping and conventional soil mapping is that digital soil mapping utilizes quantitative inference models to generate predictions of soil classes or soil properties in a geographic database, thereby attaining the expert knowledge to predict soil distribution on the landscape.<sup>33</sup></p> <p>With digital soil mapping, OCP has seen 40% higher agricultural yield for maize and potatoes and 14% greater profitability for farmers through customization.</p>

<sup>33</sup> US Department of Agriculture - <https://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/survey/geo/?cid=stelprdb1254424>

ELIGIBLE CATEGORY	EXPECTED IMPACT	ANALYSIS
		<p>Development of <u>geospatial technologies</u> are important for developing DSM (digital soil mapping) related to soil fertility and yield forecasts. Proven to be a powerful tool to research the nonpoint source pollution which can provide the decision support for management and control of the nonpoint source pollution.<sup>34</sup></p> <p>Development of new <u>bio products</u> organomineral fertilizers including Biochar will be produced to improve the efficient growth of crops. Studies have shown that Biochar can contribute to enhanced efficiency, lower nutrient losses and lower negative environmental impacts.<sup>35,36</sup> It will be produced from organic waste and created through the thermal treatment of biomass in a high temperature process called Pyrolysis. Unlike incineration, thermal decomposition of raw materials in an oxygen-free environment does not involve formation of poisonous sulphur and nitrogen oxides, carcinogenic and polluting substances, which prevents the negative impact on the environment. However, the reduction of GHG emission compared to standard fertilizer production is unknown.</p> <p>With the expected population growth and potential risk of food shortage, organic fertilizers that facilitate the growth of crops while limiting the environmental impact will help farmers increase the yield of their crops in a sustainable way.<sup>37</sup></p> <p>A <u>capacity-building program</u> to train the smallholder farmers on regenerative agriculture practices will help them improve their application of customized fertilizers and promote more sustainable farming practices, both organic and conventional. The training will be based on the OCP Group's 4R methodology, which considers the specific requirements of the soil while producing nutritious food of higher quality, i.e., richer in either micronutrients or proteins compared to similar harvests from unfertilized fields.</p>
OVERALL ASSESSMENT	ROBUST	

<sup>34</sup> "Nonpoint Source Pollution with Nitrogen and Phosphorus," US Environmental Protection Agency, March 2022

<sup>35</sup> Biochar-based fertilizer effects on crop productivity: a meta-analysis, Plant Soil 472, Melo, L.C.A., Lehmann, J., Carneiro, J.S. et al., January 2022

<sup>36</sup> The Use of Biochar for the Production of Organic Fertilizers, Czekala, Wojciech et al., Journal of Ecological Engineering, January 2019

<sup>37</sup> "Can we feed the billions?" UN Department of Economic and Social Affairs



## ESG Risks Identification and Management Systems in Place at Project Level

The identification and management of the environmental, social, and governance risks associated with the Eligible Projects are considered robust.

### Environmental management system and environmental impact assessment

OCP has made commitments to limit global warming, including a 50% reduction in the carbon footprint by 2030 compared to its 2014 baseline and net-zero emissions by 2040, and transitioning to 100% clean energy by 2030.

OCP's sites<sup>38</sup> and the projects under the Renewable Energy and Energy Efficiency categories are ISO 14001 certified. The Energy Efficiency category also has Energy Management System ISO50001 certification for each site. Moreover, since 2014, the company's carbon footprint (scope Morocco) has been certified annually, according to ISO 14064, by GUTcert,<sup>39</sup> an approved certification body.

Environmental management is embedded in OCP's 4R's nutrient stewardship framework, which aims to improve food security, environmental protection, and climate change adaptation and mitigation.<sup>40</sup> As part of OCP's Sustainable Strategy 2040, the company established its Sustainability and Green Industrial Development (SGID) Vision that ensures investment in CAPEX that contributes towards environmentally sustainable production and inclusive growth, as well as the energy transition, carbon neutrality and water stewardship.

### Protection of biodiversity and ecosystems

OCP's Biodiversity Policy,<sup>41</sup> which is withing the General Environmental Management Policy, further develops the biodiversity commitment. The policy is aligned with the 2030 Agenda and the Sustainable Development Goals (SDGs), in particular SDG 14 & 15. Every project undergoes ESIS (Environmental, Social Impact Survey?), which includes impact evaluation throughout the project lifecycle, pre-construction and decommissioning.

In addition to environmental impact studies, OCP carries out biodiversity assessments to preserve species and guarantee ecological balance. OCP asked experts to conduct an ornithology study to measure the risks related to biodiversity as well as the construction of solar power plants.

Specific initiatives are carried out to protect the biodiversity, including:

- Collaborating with stakeholders to ensure local communities' and stakeholders' expectations on biodiversity
- Analysing the impacts and dependencies associated with the ecosystem services provided by biodiversity and other elements of natural capital
- Implementing measures to avoid and minimize impacts on biodiversity and natural capital and to restore the environment in which operations are carried out
- Taking part in education, and awareness-raising projects on biodiversity and the environment

Furthermore, OCP commits to incorporating biodiversity during stages of planning, implementing, operating and dismantling of its facilities, preserving World Heritage Sites and avoiding deep-sea mining. OCP commits to not using rivers and lakes for tailing disposal (finely ground wastrock residuals from the mining process).

### Eco-design and life cycle impacts

Life cycle assessment (LCA) implemented by OCP is standardized according to the evaluation method of ISO 14040 and 14044, allowing to carry out a multi-criteria and multi-stage environmental assessment of a system (product, service, company or process) over its entire life cycle. It provides a global view of the environmental impacts and quantifies environmental effects such as overall energy consumption, natural resource extraction and atmospheric emissions to identify eco-design opportunities or improve the environmental balance of the system.

OCP's efforts to minimize environmental impacts includes initiatives for sustainable fertilizer production. The 4R framework includes soil fertility mapping and onsite field trials, R&D to develop customized fertilizers in collaboration with the Université

<sup>38</sup> OCP's sites include Jorf Lasfar, Khouribga, Port Casablanca, Pipeline, Downstream & Port de Casablanca, Safi and IMACID Jorf Lasfar.

<sup>39</sup> GUTcert is a subsidiary of the AFNOR Group.

<sup>40</sup> <https://ocpsiteprodsa.blob.core.windows.net/media/2022-08/OCP%20GROUP%20INTEGRATED%20REPORT%202021.pdf>

<sup>41</sup> [https://ocpsiteprodsa.blob.core.windows.net/media/2021-11/5\\_OCP\\_Biodiversity\\_policy\\_0.pdf](https://ocpsiteprodsa.blob.core.windows.net/media/2021-11/5_OCP_Biodiversity_policy_0.pdf)

Mohammed VI Polytechnique (UM6P), Agri-Edge and Bio-Agritech business units, and partnerships with Fertinaro Biotech.  
42,43,44,45

OCP's water program uses innovative techniques and unconventional water sources to reduce dependence on fresh water to zero by 2030. The program is designed to optimize water use, transform the production processes, and invest in the R&D to find better ways to reduce water use. A water scarcity risk assessment is structured around the Aqueduct Water Risk Atlas, which analyses current and future water risks across locations, assesses the impact of risks and control measures, and defines a mitigation plan for the most critical risks.<sup>46</sup> As part of an effort to tackle water scarcity, OCP is increasingly relying on unconventional water sources, including treated wastewater and desalinated seawater to cover 100% of their water needs by 2030. Although such projects will produce additional water resources, they will also generate negative environmental impacts. The projects are powered by co-generation that uses thermal energy produced from the sulfuric acid production process to produce clean energy. The reliance on sulfuric acid production for co-generation creates a lock-in effect, as outlined in the Use of Proceeds section, and the eco-design to limit the negative impact from sulfuric acid remains unclear.

### Energy use and GHG emissions

OCP's energy efficiency program, which is aligned with the ISO50001 standard, strives to optimize energy consumption through continuous diagnosis and deployment of digital tools for monitoring consumption and managing energy resources. A high-performance Environment Management System, in accordance with the international ISO 14001:2015, enables the continuous assessment of all aspects related to atmospheric emissions while guaranteeing a continuous improvement of the related performance. OCP follows internationally recognized standards for its decarbonation practices, including the International Fertilizer Association (IFA) working group on the emissions mitigation of fertilizer use, and the Fertilizers 1.5°C with Science Based Targets initiative (SBTi) and the World Business Council for Sustainable Development to develop a new Sectoral Decarbonization Approach for the fertilizer industry.

OCP's activities generate significant emissions, such as sulphur dioxide emissions, fluorine, ammoniac, hydrogen sulphur, and particulate matters (dust), therefore their management approach is structured around prevention and mitigation initiatives. These include technical improvements such as implementing a fluorinated gases abatement process and its application at the phosphoric acid production units of the Jorf Lasfar and Safi sites. Continuous monitoring coupled with atmospheric dispersion models allows for immediate or preventive corrective measures. Ammonia, which is processed with phosphoric acid to create fertilizer, is a significant source of emission for which technological solutions are being incorporated to track the emission level accurately. An increase in green ammonia produced from renewable energies will reduce emissions generated by fossil fuel-based ammonia. Studies are being conducted to determine the sanitary risks from fluoride gas used for the phosphoric acid and fertilizer production. This will be used in developing action plan proposals based on an internationally recognized methodology.

Carbon capture also plays an important role in decarbonization by capturing CO<sub>2</sub> emitted into the air, such as those emitted during phosphoric processing in the washing plants. Drying phosphates and fertilizers is a significant source of emissions, accounting for 14% of the OCP Group's carbon balance. Further R&D will test innovative solutions such as integrating solar thermal energy into the existing drying process. As OCP's co-generation is based on thermal energy from sulfuric acid production, OCP is conducting R&D to improve the emission level by constructing the new sulfuric acid production unit "PS4," a technology that will help improve air quality at the site in Safi by replacing two sulfuric acid production lines with simple absorption. However, it remains unclear whether the emission and pollution of the production process will be successfully reduced. Given that a large-scale desalination plant is also powered by co-generation energy, the implementation of an effective method is crucial in the overall decarbonization of OCP's operations.

### Pollution prevention and control and waste management

The OCP Group's Waste Management standard<sup>47</sup> has been developed in accordance with international good practices to identify, classify and treat waste and deployed to each entity of the Group. The standard emphasizes reduction of waste at the source, recovery of waste in a circular economy approach, and compliance with the current regulations and international best practices at all stages of the waste management process. A hydrometallurgy system is used to transform sulphur ash residue from the sulphur smelting and filtering facilities into sulfuric acid that can be used at the Safi and Jorf Lasfar processing sites. Vanadium pentoxide is a hazardous waste which features precious materials with economic and environmental value. OCP is working to reduce its dependence on ferro-vanadium by recovering vanadium resources locally.

<sup>42</sup> <https://um6p.ma/>

<sup>43</sup> <https://www.agriedge.ma/>

<sup>44</sup> <https://bioagritechthai.com/about-us/>

<sup>45</sup> <https://www.fertinagrobiotech.com/en/>

<sup>46</sup> [https://www.wri.org/applications/aqueduct/water-risk-atlas/#/?advanced=false&basemap=hydro&indicator=w\\_awr\\_def\\_tot\\_cat&lat=30&lng=-80&mapMode=view&month=1&opacity=0.5&ponderation=DEF&predefined=false&projection=absolute&scenario=optimistic&scope=baseline&threshold&timeScale=annual&year=baseline&zoom=3](https://www.wri.org/applications/aqueduct/water-risk-atlas/#/?advanced=false&basemap=hydro&indicator=w_awr_def_tot_cat&lat=30&lng=-80&mapMode=view&month=1&opacity=0.5&ponderation=DEF&predefined=false&projection=absolute&scenario=optimistic&scope=baseline&threshold&timeScale=annual&year=baseline&zoom=3)

<sup>47</sup> <https://ocpsiteprodsa.blob.core.windows.net/media/2022-08/OCP%20GROUP%20INTEGRATED%20REPORT%202021.pdf>



Projects are underway to reduce hydrocarbon waste with a pyrolysis unit in Morocco, which will allow OCP to treat more than 2,000 tons of hydrocarbon waste a year and transform it into fuel, diesel, black carbon and electricity. Expected to be commissioned in 2023, the pilot unit will be at the Khouribga site and deployed to all operating sites. Valorisation of by-products, mainly phosphogypsum, is critical to minimizing the pollution from radioactive waste. It is used for road construction, in building materials and in producing sulfuric acid and cement by thermal decomposition, recycling of sulphur from it. A program with United Nations Industrial Development Organization (UNIDO) and the Ministry of Energy, Mines and the Environment, "Making management and elimination of polychlorinated biphenyls (PCBs) sustainable in Morocco" was established in 2021 to transform 70 OCP transformers that are heavily contaminated with PCB.<sup>48</sup>

Sulfuric acid pollution is managed under the THO (Technical, Human, Organizational) which is a sulfuric technical committee that ensures communication and start-up procedures for sulfuric acid production lines by implementing start-up checklists. In terms of effluents into the local waterways as a result of phosphorus mining and processing, policies in place to handle assessment prior to the project implementation as well as remediation in case of accidents include: GIASE standard (Management of Incidents and Accidents Safety and Environment), VOSE standard (Visit and Observation Safety and Environment), PRU standard (Emergency Response Plan). OCP generates significant quantities of effluents, particularly phosphogypsum (PG) and ISO 17025, third party monitoring and periodic performance of studies to assess the impacts of liquid effluents. The implementation of the different OCP standards is audited according to internal and external audit processes (OCP internal audit standard; ISO 14001, ISO 45001 certification audits, insurers' audits). Brine water discharged from desalination plant accounts for approximately 30Mm<sup>3</sup>/Y vs 2Bm<sup>3</sup>/Y of seawater pumped for cooling purposes. The brine discharge is diluted into a larger quantity of seawater – approximately 30 million cubic meters of brine water into 2 billion cubic meters – before its disposal into the sea.

#### Responsible relations with suppliers and contractors

OCP procures essential goods related to raw materials, energy, industrial infrastructures development and transportation from 5,200 suppliers. Its purchasing policy underlines its commitments to strengthening due diligence and optimizing existing processes across quality, cost, transparency, stability, relationships with suppliers, and the development of a local industrial ecosystem and sustainability excellence. This policy is based on four main targets starting with the increase of OCP Group' local suppliers' competitiveness and industrial performance at regional and national levels, co-development of products and equipment for import substitution to maximize local content and local integration around OCP Group sites and finally to encourage socioeconomic development around the areas where OCP Group operates. Launched in 2022, the digitalization of purchasing processes through the Supply Chain Finance Platform will simplify financial transactions and create visibility for invoices to be financed. A performance assessment of the suppliers will be enhanced through the deployment of the supplier rating system to encourage the development of suppliers in OCP's ecosystem and build their capacities through monitoring and follow-up of the suppliers' performance and Health, Safety and Environment (HSE) qualification.

#### Requirements on the integration of environmental and social factors in supply chain

OCP has partially integrated suppliers' environmental, social and governance performance into their procurement approach to control HSE risks and prevent accidents and incidents when external companies intervene at OCP sites, as well as to ensure compliance with the Caisse Nationale de Sécurité Sociale (CNSS).<sup>49</sup> This is done through HSE requirements in tendering criteria as well as social regulatory obligations under the Moroccan Labor legislation, contractual social and environmental obligation, and audits in line with their HSE management of external companies' standard. Furthermore, emergency plans have been developed by OCP's procurement team for their main production inputs if key suppliers face weather-related disruptions. OCP reports that local production capacities are increasingly being established to minimize supply chain disruptions in farms.

OCP's supply chain involves multiple transportation systems, notably heavy mining trucks to carry out phosphate ore from mining areas to washing plants. Enriched phosphate is transported to chemical facilities by train or by pipeline, bulk carriers and tankers. In order to combat the pollution arising from these transports, OCP committed to implement a slurry pipeline between its biggest mine (Khouribga) and its biggest chemical hub (Jorf Lasfar). The slurry pipeline enables the transport of more phosphate rock and removes all intermediary handling. The pipeline has enabled the reduction of train transportation, which consumes fossil energy, by 50%. In terms of social factors, OCP has implemented its GEEX standard that governs the HSE management of external companies.<sup>50</sup>

<sup>48</sup> <https://www.thegef.org/projects-operations/projects/9916>

<sup>49</sup> <http://cnss.cd/>

<sup>50</sup> <https://ocpsiteprod.sba.blob.core.windows.net/media/2022-08/OCP%20GROUP%20INTEGRATED%20REPORT%202021.pdf>

### Fundamental human and labour rights

OCP abides by the UN Guiding Principles on Business and Human Rights and the OECD Guidelines for Multinational Enterprises to identify, assess, prevent, monitor, minimize and remediate its potential adverse human rights impacts that arise from its activity. Furthermore, it adheres to the UN Declaration of Human Rights to eliminate all forms of forced and compulsory labour, prevent child labour, ensure decent labour conditions and social dialogue, treat workers and vulnerable groups with dignity and respect, prevent discrimination and any form of violence in the workplace, protect health and safety, respect and adhere to rights of privacy, support the development of employees and the ecosystem, and enhance diversity, inclusiveness and gender balance across the Group's workforce. OCP's social partners have a solid contractual framework, through the Social Charter, which defines the principles, rules, and obligations related to social dialogue annual negotiations with employee representatives.

The grievance mechanisms integrated into OCP's risk management processes are in line with those of the International Council on Mining and Metals (ICMM). OCP's action plan for 2025 in terms of Human rights involves strengthening internal training and ensuring all employees understand the human rights challenges to ensure that respect for human rights is integrated consistently throughout the company.

As a recipient of the "Assess" level, the first level of EDGE (Economic Dividends for Gender Equality) Certification<sup>51</sup>, OCP is committed to the diversity of their employees. The "diversity" vision has been developed around three main axes: 1) Exemplarity: ensuring inclusivity of women by inspiring women within OCP and outside and providing equal opportunities to all by fostering an inclusive culture that values the potential of women employees; 2) Education: OCP aims to promote education for all, including equal opportunities from the earliest age; and 3) Entrepreneurship: OCP aims to invest in entrepreneurship to unleash the potential of individuals beyond the Group, and supporting all women with promising potential through coaching, mentoring, networking and incubation programs.

### Health and safety of workers and local stakeholders

A health and safety management system (HSMS) has been implemented, based on the ISO 45001 standards, that covers OCP's employees and workers who are not employees but whose work and/or workplace is controlled by the OCP Group.<sup>52</sup> All sites are audited for HSE training, and each site implements a program to identify, assess and mitigate specific safety risks driven by a safety manager who coordinates a network of safety correspondents assigned to different areas of the site. Health & Safety committees composed of employees' representatives are regularly held to ensure the co-construction and the efficiency of the performance cascading and feedback culture. This OHS management system is supported by the DUPONT OCP Operations Consulting (DOOC) joint venture. OCP suppliers and subcontractors also receive safety training and procedures for interventions on industrial sites.

### Promote dialogue with local stakeholders and communities

OCP's social dialogue policy is in accordance with the UN Declaration of Human Rights and the four fundamental rights of the International Labour Organization's (ILO) eight core conventions as set out in the Declaration on Fundamental Principles and Rights at Work.<sup>53</sup> This policy involves social dialogue institutions, including Staff Representatives, Union Representatives, Health and Safety Delegates and Union Delegates who are members of the national offices of the key representative trade unions at OCP. The Proactive Social dialogue charter, adopted by OCP's social partners, defines the principles, rules and obligations related to social dialogue, mutual commitments relating to employee relations management, procedures for setting up and operating employee representative institutions, mechanisms and procedures for managing complaints and negotiations and settling collective disputes, as well as remediation relating to social dialogue, measures to support employee relations and promoting internal social dialogue.

### Business Ethics

Corporate governance at the OCP Group relies on strong fundamental values aligned with the OECD principles and the recommendations of the International Corporate Governance Network (ICGN): Anti-corruption policy.<sup>54</sup> OCP Group earned the first level of EDGE certification, the global standard for assessing corporate performance in terms of gender equality and the creation of equal career opportunities for both female and male employees. This certification reflects good practices towards gender equality, including gender balance within core functions, recruitment and promotion policies, pay equity, and inclusive culture. To ensure that management is well versed with the governance policies, in 2021 the top 100 managers were trained on corporate social responsibility, compliance and corruption, General Data Protection Regulation, and anti-competitive practices. In terms of conflict of interest, the framework for mitigating and preventing conflicts of interest is governed by Law 17-95 related to the SA (Solicit Anonym) and Law 69-00 related to financial control, to which OCP is

<sup>51</sup> <https://edge-cert.org/>

<sup>52</sup> <https://ocpsiteprodsa.blob.core.windows.net/media/2022-08/OCP%20GROUP%20INTEGRATED%20REPORT%202021.pdf>

<sup>53</sup> [https://ocpsiteprodsa.blob.core.windows.net/media/2021-11/23\\_OCP%20Social%20dialogue%20policy.pdf](https://ocpsiteprodsa.blob.core.windows.net/media/2021-11/23_OCP%20Social%20dialogue%20policy.pdf)

<sup>54</sup> <https://www.icgn.org/>

subject.<sup>55</sup> The OCP Group deploys a risk management system, integrated into its overall management system, and business continuity processes are conducted in line with international standards (ISO 31000, ISO 22301) and best practices. The Internal Audit Group Department operates its engagements in accordance with International Standards for the Professional Practice of Internal Auditing and its activities have been certified by IFACI (French branch of the Institute of Internal Auditors - IIA) since 2013.

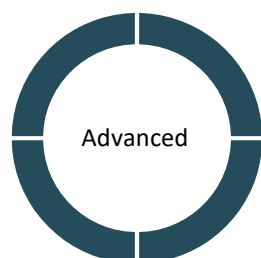
#### Social and economic development

OCP is committed to empowering people, including women, local communities and vulnerable groups, through key investments including education support for next generation entrepreneurs as well as access to medical health programs. Development projects for Morocco's green and eco-responsible cities, driven by innovation, is another major focus of growth for the local community. The "Act4Community" network was established to foster the creation of shared value where volunteer OCP Group employees work at the industrial site level with local communities to identify common challenges and develop entrepreneurship, education, health, culture, and regional infrastructure development initiatives fitting with their needs, as well as to create local ecosystems. As part of this network, a regular impact assessment is carried out for the local community to prevent or remediate complaints. In order to ensure local community and farmers' education, five digital schools covering five production sites are established with a goal to train 1,000 young programmers a year by 2023. OCP has established its Water Program to ensure adequate water supply for its communities in a water-stressed country, an important mission for the Group. OCP's water program has been established to recycling wastewater and desalinating seawater at scale.<sup>56</sup> Beyond supplying water to the community, these programs present economic opportunities by creating new jobs for its research and construction, increasing efficiency and improving profitability.

<sup>55</sup> [https://www.moroccanembassy.sa/index.php?route=information/information&information\\_id=4](https://www.moroccanembassy.sa/index.php?route=information/information&information_id=4)

<sup>56</sup> <https://ocpsiteprodsa.blob.core.windows.net/media/2022-08/OCP%20GROUP%20INTEGRATED%20REPORT%202021.pdf>

# ISSUER



The OCP Group is a producer and exporter of phosphate rock and phosphoric acid. The Issuer extracts, prices and commercializes phosphate and phosphate products, in particular phosphoric acid and fertilizers. The OCP Group was founded in 1920 and is headquartered in Casablanca, Morocco. In 2018, the Issuer acquired a 20% stake in Fertinagro Biotech, an entity specializing in the production of fertilizers in Spain.

## Level ESG Performance

The Issuer's ESG performance was assessed through a complete process of rating and benchmarking.

As of July 2021, the OCP Group displays an Advanced ESG performance (69/100), ranking number 1 in Moody's ESG Solutions' Mining & Metals Emerging Market sector, which covers 48 companies. The Issuer is Advanced in the Environmental and Social pillars and Limited in the Governance pillar.

DOMAIN	COMMENTS	OPINION
Environmental	<u>The OCP Group's performance on the Environment pillar is considered advanced.</u>	Advanced
	The OCP Group has issued a formalized commitment to environmental protection, and has set ambitious, quantified targets relative to the sector on the management of energy, water, waste, local pollution, transportation and atmospheric emissions. The Issuer has committed to a 50% reduction in its carbon footprint by 2030, compared to 2014 emissions, and achieving carbon neutrality by 2040. One of the levers to obtain its emissions target is through the transition towards clean energy consumption, with the Issuer's objective to meet 100% of its electricity needs through wind, solar, or cogeneration production by 2030.	Robust
	The Issuer implements innovative solutions in supporting its environmental commitments, particularly regarding the management of water, atmospheric emissions, energy, waste and biodiversity in its operations. A majority of the Issuer's sites are either ISO 14001 certified or, for those without, in the process of certification. In addition, the OCP maintains that none of the sites owned, rented, or managed by the Issuer are located in or beside protected areas or those rich in biodiversity, mitigating the risks to disturbance of wildlife. With regards to water management, a material risk for the sector, OCP intends to reduce consumption by 15% by 2024 (base year 2019) and meet 100% of water needs covered by non-conventional resources, including desalination of seawater and reuse of treated domestic water waste, by 2030. Moreover, the Issuer has set targets with regards to its hazardous waste production, aiming to divert 70% of non-mining hazardous waste from disposal by 2025.	Limited
		Weak
Social	<u>The OCP Group's performance on the Social pillar is considered advanced.</u>	Advanced
	The OCP Group has implemented extensive social measures, detailed in its Sustainability Report, that bolster social and economic development of communities. These include increasing the local purchase share, establishing SME	

	<p>incubators or accelerators around the Group production sites, expanding coding schools to train young programmers, creating rural agricultural schools for small farmers and supporting women's cooperatives that valorise local products.</p> <p>Moreover, the Issuer ensures the respect of human and labour rights in its operations, which are supported by a third-party assessment, human rights training programs for employees, external human rights audits, and consulting from local independent and representative stakeholders. The Issuer's Working Conditions, and Social Dialogue Policies allows for collective bargaining agreements with international trade unions, which represent 86% of OCP's workforce, address work environment quality.</p>	Robust
	<p>The OCP Group has developed its Occupational Health and Safety Policy to target "zero accidents and zero impact on health," which covers all the Issuer's employees and contractors. Measures to achieve its goal include safety training for all employees and contractors, a methodology on how to analyse the causes of serious or potentially serious injuries, and regular safety audits from independent bodies to verify the compliance with the management system and safety standard requirements. All OCP industrial operations sites are Product Steward Excellence Protect &amp; Sustain certified by the IFA, which covers the quality, environment, health, and worksite safety aspects of ISO 9001 and 14001 certifications, as well as OHSAS 18001 certification.</p>	Limited
		Weak
Governance	<p><u>The OCP Group's performance on the Governance pillar is considered limited.</u></p> <p>The OCP Group has been taking steps to improve the transparency and integrity of its lobbying practices. The Issuer has also implemented an Anti-Bribery and Corruption Policy and Code of Conduct, which includes training across the organization and external controls to support the Issuer's commitment. The code holds employees personally responsible for preventing corruption and is applicable to the Issuer's employees across the group as well as its business partners and third parties.</p> <p>The Issuer's corporate governance is relatively weak in certain aspects, particularly with regard to board independence and diversity as well as executive compensation reporting. The roles of the Chairman and the CEO are combined and there are no senior independent directors nor a specific committee responsible for nominating directors. The Issuer states that the board of directors' members were selected during the Issuer's transformation into a limited Issuer by its main shareholder, which is the Moroccan state. The board of directors is comprised of representatives of the state ministries, which can rotate with each ministerial change.</p> <p>The Head of the CSR department reports directly to the CEO and board. CSR issues are addressed through the Sustainability Platform, reporting to the Operational Committee on ESG matters. In 2020, the OCP Group developed an ESG and Ethics committee that collaborates with internal committees and assists the board of directors.</p>	Advanced
		Robust
		Limited
		Weak

## Management of ESG Controversies

As of August 2022, OCP Group faces two stakeholder-related ESG controversies, linked to two of the six domains we analyse:

- Human Resources, in the criteria of "Health and Safety".
- Business Behaviour, in the criteria of "Anti-competitive practices".

Frequency: The controversies faced are considered "isolated"<sup>57</sup>; better than the sector average.

Severity: The severity of the case, based on the analysis of the impact on both the Issuer and its stakeholders, is considered "high"<sup>58</sup>; in line with the sector.

Responsiveness: OCP Group is considered overall "remediative"<sup>59</sup>; better than the sector average.

## Involvement in Controversial Activities

The Issuer appears to not be involved in any of the 17 controversial activities screened under our methodology, namely: Alcohol, Animal welfare, Cannabis, Chemicals of Concern, Civilian firearms, Coal, Fossil Fuels industry, Unconventional oil and gas, Gambling, Genetic engineering, Human embryonic stem cells, High-interest rate lending, Military, Nuclear Power, Pornography, Reproductive Medicine and Tobacco.

The controversial activities research provides screening of companies to identify involvement in business activities that are subject to philosophical or moral beliefs. The information does not suggest any approval or disapproval on their content from Moody's ESG Solutions.

<sup>57</sup> MESG scale of assessment: Isolated / Occasional / Frequent / Persistent.

<sup>58</sup> MESG scale of assessment: Minor / Significant / High / Critical.

<sup>59</sup> MESG scale of assessment: Non-communicative / Reactive / Remediative / Proactive.

# METHODOLOGY

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In our view, Environmental, Social and Governance (ESG) factors are intertwined and complementary. As such they cannot be separated in the assessment of ESG management in any organisation, activity or transaction. In this sense, we provide an opinion on the Issuer's ESG performance as an organisation, and on the processes and commitments applicable to the intended issuance.

Our Second Party Opinions (SPOs) are subject to internal quality control at three levels (Analyst, Project Manager and Quality Reviewer). If necessary, this process is complemented by a final review and validation by the Expertise Committee and Supervisor. A right of complaint and recourse is guaranteed to all companies under our review.

## COHERENCE

Scale of assessment: not coherent, partially coherent, coherent

This section analyses whether the activity to be financed through the selected instrument is coherent with the Issuer's sustainability priorities and strategy, and whether it responds to the main sustainability issues of the sector where the Issuer operates.

## ISSUANCE

### Alignment with the Principles

Scale of assessment: Not aligned, Partially aligned, Aligned, Best Practices

*The Framework has been evaluated by Moody's ESG Solutions according to the ICMA's Green Bond Principles - June 2021 ("GBP") (with June 2022 Appendix 1) and the LMA/APLMA/LSTA's Green Loan Principles - February 2021 ("GLP") and on our methodology based on international standards and sector guidelines applicable in terms of ESG management and assessment.*

### Use of proceeds

The definition of the Eligible Projects and their sustainable objectives and benefits are a core element of Green/Social/Sustainable Bonds and Loans standards. Moody's ESG Solutions evaluates the clarity of the definition of the Eligible Categories, as well as the definition and the relevance of the primary sustainability objectives. We evaluate the descriptions of the expected benefits in terms of relevance, measurability and quantification. In addition, we map the potential contribution of Eligible Projects to the United Nations Sustainable Development Goals' targets.

### Process for evaluation and selection

The evaluation and selection process is assessed by Moody's ESG Solutions on its transparency, governance and relevance. The eligibility criteria are assessed on their clarity, relevance and coverage vs. the intended objectives of the Eligible Projects.

### Management of proceeds

The process and rules for the management and the allocation of proceeds are assessed by Moody's ESG Solutions on their transparency, traceability and verification.

### Reporting

The monitoring and reporting process and commitments defined by the Issuer are assessed by Moody's ESG Solutions on their transparency, exhaustiveness and relevance, covering the reporting of both proceeds' allocation and sustainable benefits (output, impact indicators).



## Contribution to sustainability

Scale of assessment: Weak, Limited, Robust, Advanced

Our assessment of activities' contribution to sustainability encompasses both the evaluation of their expected positive impacts on environmental/social objectives, as well the management of the associated potential negative impacts and externalities.

### Expected positive impact of the activities on environmental/social objectives

The expected positive impact of activities on environmental/social objectives to be financed by the Issuer or Borrower is assessed on the basis of:

- i) the relevance of the activity to respond to an important environmental/social objective for the sector of the activity;<sup>60</sup>
- ii) the scope of the impact: the extent to which the expected impacts are reaching relevant stakeholders (i.e. the Issuer, its value chain, local and global stakeholders);
- iii) the magnitude and durability of the potential impact of the proposed activity on the environmental/social objectives (capacity to not just reduce, but to prevent/avoid negative impact; or to provide a structural/long-term improvement);
- iv) for environmental objectives only: the extent to which the activity is adopting the best available option.

### ESG risk management for eligible activities

The identification and management of the potential ESG risks associated with the eligible projects/activities are analysed on the basis of Moody's ESG Solutions' ESG assessment methodology, international standards and sector guidelines applicable in terms of ESG management and assessment.

## ISSUER

### Issuer's ESG Performance

Scale of assessment of ESG Performance: Weak, Limited, Robust, Advanced

NB: The Issuer's level of ESG performance (i.e. commitments, processes, results of the Issuer related to ESG issues), has been assessed through a complete process of rating and benchmarking developed by us. The Issuers' ESG performance has been assessed by us on the basis of its:

- Leadership: relevance of the commitments (content, visibility and ownership).
- Implementation: coherence of the implementation (process, means, control/reporting).
- Results: indicators, stakeholders' feedbacks and controversies.

<sup>60</sup> The importance of a specific social need at country level is assessed on the basis of the country performance on the priority SDG that the project is targeting using data from Sachs, J., Schmidt-Traub, G., Kroll, C., Lafortune, G., Fuller, G., Woelm, F. 2020. The Sustainable Development Goals and COVID-19. Sustainable Development Report 2020. Cambridge: Cambridge University Press.

## Management of Stakeholder Related ESG Controversies

Moody's ESG Solutions defines a controversy as public information or contradictory opinions from reliable sources that incriminate or make allegations against an Issuer regarding how it handles ESG issues as defined in Moody's ESG Solutions' ESG framework. Each controversy may relate to several facts or events, to their conflicting interpretations, legal procedures or non-proven claims.

We reviewed information provided by the Issuer, press content providers and stakeholders (partnership with Factiva Dow Jones: access to the content of 28,500 publications worldwide from reference financial newspapers to sector-focused magazines, local publications or Non-Government Organizations). Information gathered from these sources is considered as long as it is public, documented and traceable.

We provide an opinion on companies' controversies risks mitigation based on the analysis of 3 factors:

- **Frequency:** reflects for each ESG challenge the number of controversies that the Issuer has faced. At corporate level, this factor reflects on the overall number of controversies that the Issuer has faced and the scope of ESG issues impacted (scale: Isolated, Occasional, Frequent, Persistent).
- **Severity:** the more a controversy is related to stakeholders' fundamental interests, proves actual corporate responsibility in its occurrence, and have caused adverse impacts for stakeholders and the company, the higher its severity is. Severity assigned at the corporate level will reflect the highest severity of all cases faced by the company (scale: Minor, Significant, High, Critical).
- **Responsiveness:** ability demonstrated by an Issuer to dialogue with its stakeholders in a risk management perspective and based on explanatory, preventative, remediating or corrective measures. At corporate level, this factor will reflect the overall responsiveness of the company for all cases faced (scale: Proactive, Remediate, Reactive, Non- Communicative).

The impact of a controversy on a company's reputation reduces with time, depending on the severity of the event and the company's responsiveness to this event. Conventionally, our controversy database covers any controversy with Minor or Significant severity during 24 months after the last event registered and during 48 months for High and Critical controversies.

## Involvement in Controversial Activities

17 controversial activities have been analysed following 30 parameters to screen the company's involvement in any of them. The company's level of involvement (Major, Minor, No) in a controversial activity is based on:

- An estimation of the revenues derived from controversial products or services.
- The specific nature of the controversial products or services provided by the company.

## OUR ASSESSMENT SCALES

Scale of assessment of Issuer's ESG performance or strategy and financial instrument's Contribution to sustainability		Scale of assessment of financial instrument's alignment with Green and/or Social Bond and Loan Principles	
Advanced	Advanced commitment; strong evidence of command over the issues dedicated to achieving the sustainability objective. An advanced expected impact combined with an advanced to robust level of ESG risk management & using innovative methods to anticipate new risks.	Best Practices	The Instrument's practices go beyond the core practices of the ICMA's Green and/or Social Bond Principles and/or of the LMA/APLMA/LSTA's Green and/or Social Loan Principles by adopting recommended and best practices.
Robust	Convincing commitment; significant and consistent evidence of command over the issues. A robust expected impact combined with an advance to robust level of assurance of ESG risk management or an advanced expected impact combined with a limited level of assurance of ESG risk management.	Aligned	The Instrument has adopted all the core practices of the ICMA's Green and/or Social Bond Principles and/or of the LMA/APLMA/LSTA's Green and/or Social Loan Principles.
Limited	Commitment to the objective of sustainability has been initiated or partially achieved; fragmentary evidence of command over the issues. A limited expected impact combined with an advanced to limited level of assurance of ESG risk management; or a robust expected impact combined with a limited to weak level of assurance of ESG risk management; or an advance expected impact combined with a weak level of assurance of ESG risk management.	Partially Aligned	The Instrument has adopted a majority of the core practices of the ICMA's Green and/or Social Bond Principles and/or of the LMA/APLMA/LSTA's Green and/or Social Loan Principles, but not all of them.
Weak	Commitment to social/environmental responsibility is non-tangible; no evidence of command over the issues. A weak expected impact combined with an advanced to weak level of assurance of ESG risk management or a limited expected impact with a weak level of assurance of ESG risk management.	Not Aligned	The Instrument has adopted only a minority of the core practices of the ICMA's Green and/or Social Bond Principles and/or of the LMA/APLMA/LSTA's Green and/or Social Loan Principles.

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