



LEADING THE WAY

SUSTAINABILITY REPORT 2022



ABOUT THIS REPORT

Ma'aden has been publishing a sustainability report annually since 2019, which makes this report our fourth sustainability report. Our previous sustainability reports and other corporate disclosures are accessible through our homepage.

REPORT BOUNDARY

This report covers Ma'aden HQ and its seven affiliates: Ma'aden Aluminum (MRC, MBAC, MAC), Base Metals & New Minerals (BMNM), Industrial Minerals Company (IMC), and Ma'aden Phosphate (MWSPC, MPC), which are all located in the Kingdom of Saudi Arabia. It does not cover any other subsidiaries or joint ventures.

REPORTING PERIOD

This report covers Ma'aden's activities and performance that occurred from 1st January to 31st December 2022.

However, when such information is appropriate for better indicating major changes in the management of material ESG topics and the trajectory of performance, information from the recent previous years or the 1st quarter of 2023 is also provided as a reference.

REPORTING STANDARD

This report is prepared with reference to the GRI Standards. Please refer to the GRI Content Index section of this report, to see the details of which standards we have referenced to disclose which information in this report.

Also, to reflect our industry and region-specific contexts in our sustainability disclosure, Ma'aden also referred to various initiatives and standards, which include but not limited to: United Nations Global Compact (UNGC), Sustainable Development Goals (SDGs), Saudi Vision 2030, Aluminum Stewardship Initiative (ASI), Occupational Safety and Health Administration (OSHA) standard, Greenhouse Gas (GHG) Protocol, Sustainable Accounting Standard Board (SASB)'s standards, and Saudi's National Standard for Sustainability (NSS).

maaden.com.sa



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CONTINUED GROWTH

Since Ma'aden's modest beginnings in 1997, we have grown from a single gold mine to one of the top 10 largest mining companies in the world, based on market capitalization. Growth remains a strategic priority for us. But as we grow, so do our impacts and responsibilities to Saudi Arabia, to people and to the planet.

We must balance return on investment with a commitment to minimizing our environmental footprint and maximizing positive impacts. This commitment is encapsulated in our vision: to become a sustainable mining champion with a global presence.

SAUDI VISION 2030

We now have an opportunity to lead the development of Saudi Arabia's mineral endowment estimated to be worth \$1.3 trillion. This could help deliver long term economic diversification and industrial development, impact the lives of our young, vibrant population, empower remote communities, and support the diversification of global supply chains critical to energy transition. This makes our sector of strategic importance to the delivery of Saudi Vision 2030 goals and the future of our country.



"We are seeing improvements from the steps we are taking and we will continue to invest in training, innovation, technology, sustainable development, and predictive measures to ensure continued improvements."

– H.E. YASIR O. AL RUMAYYAN
Chairman of the Board

MA'ADEN'S TRANSFORMATION

Our 2040 strategy has been defined to develop this opportunity. Whilst growth is at the center of our strategy, we have also been clear on our ambition to become a Saudi ESG role model. This means we are committed to embedding sustainability across Ma'aden's businesses, and ensuring we have a positive impact across our footprint. This has underpinned our decision to launch our transformation program – we recognize that we need to make changes to how we operate and how we become the mining company of the future.

We are also building high value partnerships that are expanding our capabilities to future-proof our business and ensure our growth is sustainable. Through partnerships, we are investing in research and innovation on ESG developments that are going to help us transform Ma'aden into the mining company of the future.

One example of our innovation is the partnership with King Abdullah University of Science and Technology (KAUST) to develop a breakthrough innovation to extract valuable minerals from seawater. Together Ma'aden and KAUST are investing \$6 Million in a technology startup for lithium extraction from seawater. Other examples of our partnership for innovation are the ones to reduce our environmental footprint. In 2022, with Outotec and Larsen&Toubro consortium, we successfully introduced a solar power solution at our Mansourah-Massarrah gold project. Ma'aden also started to reuse treated wastewater at scale, through an extended partnership with National Water Company.

The safety and security of our people, assets, and neighboring communities remains an absolute priority for us. We are seeing improvements from the steps we are taking and we will continue to invest in training, innovation, technology, sustainable development, and predictive measures to ensure continued improvements.

GOVERNANCE

Our commitment to strong corporate governance is also critical to our future and our growth plans. As we grow, we need to ensure that our corporate governance structures adapt with us and provide the necessary checks and balances to protect our business, our people, and the communities we work with. At Ma'aden, sustainability topics including our business excellence, environmental footprint, and social impact are among the highest priority and are overseen by the board of directors. Also, through our robust sustainability framework and management systems for sustainability topics including Health, Safety, Security, and Environment, Ma'aden is ensuring the implementation of sustainable business practices starting from the top management to our employees, contractors, and supply chain. On behalf of the Board of Directors, I would like to thank the leadership of Saudi Arabia, our shareholders, investors, team members, and local communities for their support in helping move us closer to realizing our vision for sustainable growth.

H.E. YASIR O. AL RUMAYYAN
Chairman of the Board

▶ WE NOW HAVE AN OPPORTUNITY TO LEAD THE DEVELOPMENT OF SAUDI ARABIA'S MINERAL ENDOWMENT ESTIMATED TO BE WORTH \$1.3 TRILLION.

▶ IN 2022, WITH OUTOTEC AND LARSEN&TOUBRO CONSORTIUM, WE SUCCESSFULLY INTRODUCED A SOLAR POWER SOLUTION AT OUR MANSOURAH-MASSARAH GOLD PROJECT.

COMMITMENT TO CHANGE

SAUDI VISION 2030

2022 has been an exceptional year for Ma'aden. My first year as CEO has seen an impressive drive by the team towards the company's transformation, which is positioning us for growth. What has been clear from the outset is that, under the guidance of Saudi Vision 2030, any growth must be sustainable.

We are targeting carbon neutrality by 2050. We want to lead the change on sustainable growth in Saudi Arabia and realize our goal of becoming an ESG role model in the country. We recognize the important role we play in the development of the Saudi economy – in making mining its third pillar under Saudi Vision 2030. This is a responsibility to the whole Saudi community.

ENVIRONMENT

Our ambitious growth plans require a significant amount of change across our business. This is why we launched our Numu transformation program. We have created a centralized Sustainability Center of Excellence to drive the company's ESG strategy, and introduced enhanced policies under our new operating model. The Board is driving these activities through our Safety & Sustainability Committee.

There were a number of major sustainability milestones in 2022. We obtained blue ammonia certification for 138,000 tons of production putting us on track to become the world's largest exporter. We are now one of the top three buyers of carbon credits in the world through our participation in the first Middle East Voluntary Carbon Market. We pushed forward with our plans to plant 20 million trees by 2040, planting more than 3 million trees across the Kingdom so far. We also introduced a new system at Ras Al-Khair to reuse 80% of water for local landscape irrigation. We are building the world's largest solar process heat plant at our Alumina refinery, which will reduce carbon emissions by up to 50%, and we are installing Saudi Arabia's first hybrid power plant in our Mansoura & Massarah gold project with 6 MW capacity.

SUPPORTING COMMUNITIES

We are also playing an increasingly important role in supporting small businesses and building industrial and manufacturing capacity in Saudi Arabia as we continue our commitment to helping drive economic diversification. In September, we launched the Tharwah program, helping build domestic supply chains and feeding into downstream development.

With operations across the Kingdom, we are uniquely positioned to empower remote communities. We are building schools and investing in education in the areas in which we work, giving young people access to skills and opportunities, providing better quality of life for communities in the long term.

We have ensured that our suppliers are meeting ESG performance targets by working with them to understand their processes better to help them raise ESG standards. We introduced a Supplier Code of Conduct, that is mandatory for all of our suppliers and will ensure we only work with market leading companies with robust ESG credentials. And we have initiated the most comprehensive materiality assessment in Ma'aden's history to examine how our business is impacted by sustainability issues, and how our activities impact society and the environment to understand how we can do better.

DIVERSITY AND PEOPLE DEVELOPMENT

We have taken concrete steps to address the issue of gender diversity, increasing the number of Saudi women in our workforce by 42% in 2022 alone. The total hours of training provided to our female employees in 2022 has shown a staggering 200% increase over the previous year demonstrating our commitment to developing this valuable

resource in line with Saudi Vision 2030. Across the company, we have delivered 160,000 hours of training as we constantly invest in our people.

As our transformation program takes hold, and as we aim higher in our ESG ambitions, I am confident that we will set benchmarks for sustainability in Saudi Arabia, in our industry, and globally. We look forward to working with our people, partners, local communities and all stakeholders to ensure the sustainable development of the mining industry in the Kingdom as we continue leading the way towards becoming an ESG role model in Saudi Arabia.

ROBERT WILT
Chief Executive Officer

“We want to lead the change on sustainable growth in Saudi Arabia and realize our goal of becoming an ESG role model in the country.”

– **ROBERT WILT**
Chief Executive Officer

▶ **WE OBTAINED BLUE AMMONIA CERTIFICATION FOR 138,000 TONS OF PRODUCTION PUTTING US ON TRACK TO BECOME THE WORLD'S LARGEST EXPORTER.**

▶ **WE PUSHED FORWARD WITH OUR PLANS TO PLANT 20 MILLION TREES BY 2040, PLANTING MORE THAN 3 MILLION TREES SO FAR ACROSS THE KINGDOM**

▶ **WE INTRODUCED A SUPPLIER CODE OF CONDUCT, THAT IS MANDATORY FOR ALL OF OUR SUPPLIERS AND WILL ENSURE WE ONLY WORK WITH MARKET LEADING COMPANIES WITH ROBUST ESG CREDENTIALS.**



CHANGING... THE WORLD

ABOUT MA'ADEN

Ma'aden is the largest multi-commodity mining and metals company in the Middle East and among the fastest-growing mining companies in the world.



ANNUAL REPORTS

RELEVANT GRI STANDARDS

GRI 2: General Disclosures
GRI 205: Anti-Corruption

Ma'aden is the fastest-growing multi-commodity mining and metals company in the world, aiming to be a role model in responsible and sustainable mining.



COMPANY PROFILE

Headquartered in Riyadh, the capital of the Kingdom of Saudi Arabia, Ma'aden was formed by the Royal Decree number m/17 date 14/11/1417 (H) to undertake all mining activities and to develop the kingdom's mining sector.

The company was listed in the Saudi Stock Exchange, Tadawul, as a Saudi Joint Stock Company in 2008. As of December 2022, a total of 2,461,182,292 shares are outstanding, of which approximately 70% are held by institutional investors including Public Investment Fund (PIF), the Kingdom's sovereign wealth fund.

Further information on our operations, production, and sales that are not introduced in this report is included in Ma'aden's Annual Report.

CORPORATE VALUE

Through our four values—Ownership, Integrity, Teamwork, and Care—Ma'aden promotes sustainability and reaffirms our commitment to contribute to economic development and our own long-term performance, responsibly managing the Environmental, Social, and Governance (ESG) topics that are most material to our operations. Sustainability is in Ma'aden's DNA, is central to our 2025 Strategic Plan, and will continue to be at the heart of Ma'aden's evolving local and global business.

MA'ADEN'S CORE VALUES



Personal responsibility and empowerment of others for quality results in pursuit of our collective goals.



Honesty, fairness and the highest ethical and business standards in our relationships with each other and with our stakeholders.



Concern and respect for our people, the communities we touch and the environments we operate in.



Communication and collaboration with each other and with our partners to achieve success together.

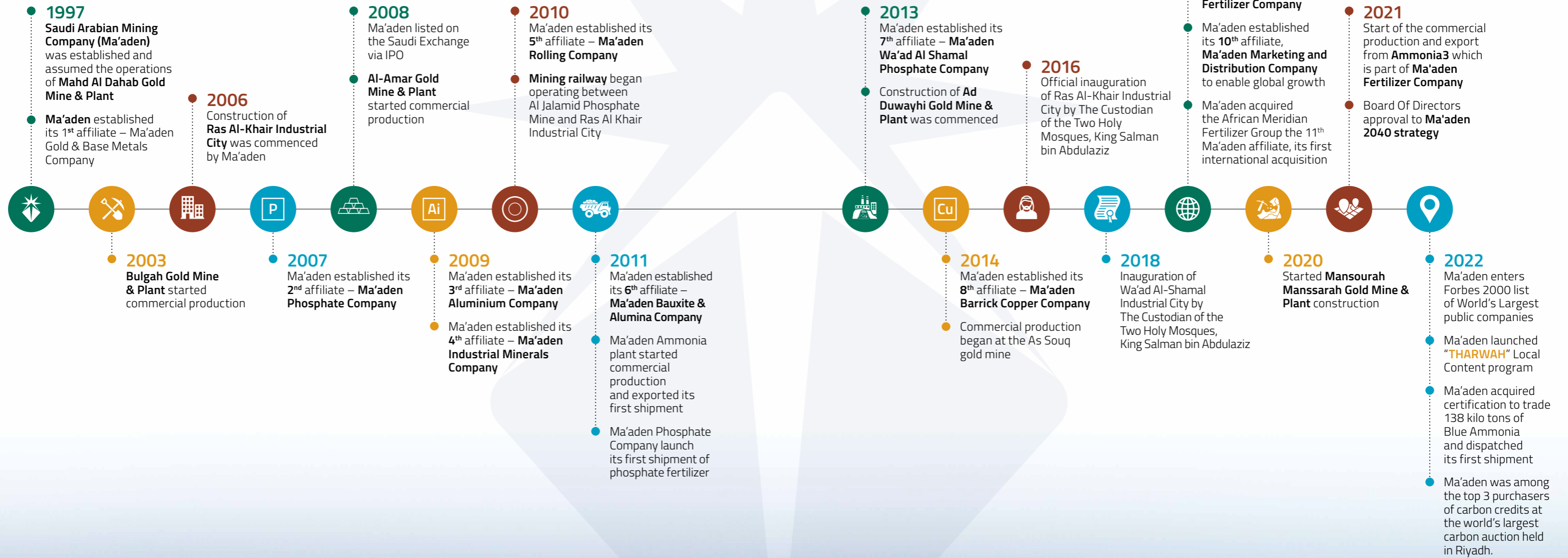
COMPANY HISTORY

Ma'aden was established by royal decree to develop Saudi Arabia's minerals sector in 1997 and has now become one of the top 10 global mining companies based on market capitalization.

Beginning with a single gold mine, Ma'aden has continuously explored new minerals and expanded our businesses. As a result, in 2022 Ma'aden is providing the global market with various metals and minerals including gold, copper, zinc, aluminum, phosphate, bauxite, and magnesite.

The history that Ma'aden has come along in the process of our growth is as follows:

Ma'aden is providing the global market with various metals and minerals including gold, copper, zinc, aluminum, phosphate, bauxite, and magnesite.



CORPORATE STRATEGY

Ma'aden aspires to become a KSA sustainable mining champion leading the development of mining industry in the Kingdom with a global presence embracing integrity, care, teamwork and ownership. Ma'aden's corporate strategy will deliver ~8-10x EBITDA growth by 2040 and create substantial shareholder value while driving socio-economic impact for KSA in alignment with vision 2030 and the Mining Strategy.

This growth will come from building scale in existing businesses and expanding the portfolio in new minerals through KSA exploration. Ma'aden's strategy 2040 relies on four strategic pillars including leveraging KSA resources, focusing on value, driving productivity with strong stewardship of environmental, social and corporate governance (ESG) and the foundational enabler of exploration. Indeed, Ma'aden 2040 strategy is founded in robust exploration strategy of current and new minerals in an accelerated effort to unlock the promising KSA geological endowment leveraging world class partners and cutting-edge technologies.

Ma'aden's profitable business acceleration portfolio includes several strategic initiatives under the four strategic pillars including, but not limited to, diversified fertilizer initiatives to become among the top 3 producers in the global fertilizer market, primary aluminum production capacity growth to become among the top 10 globally, and diversified gold portfolio as well as base metals including copper, zinc and other industrial metals.

ESG is a core strategic focus for Ma'aden. The company has adopted an ESG strategy to create positive, enduring change in the mining industry in line with the global ecological sustainability agenda. Notably, Ma'aden aims to achieve carbon neutrality in 2050.



LEVERAGE KSA RESOURCES

- Leveraging partnerships and technologies to unlock the KSA's geological endowment



VALUE FOCUS

- Building scale in existing businesses
- Expanding the portfolio in new minerals through KSA



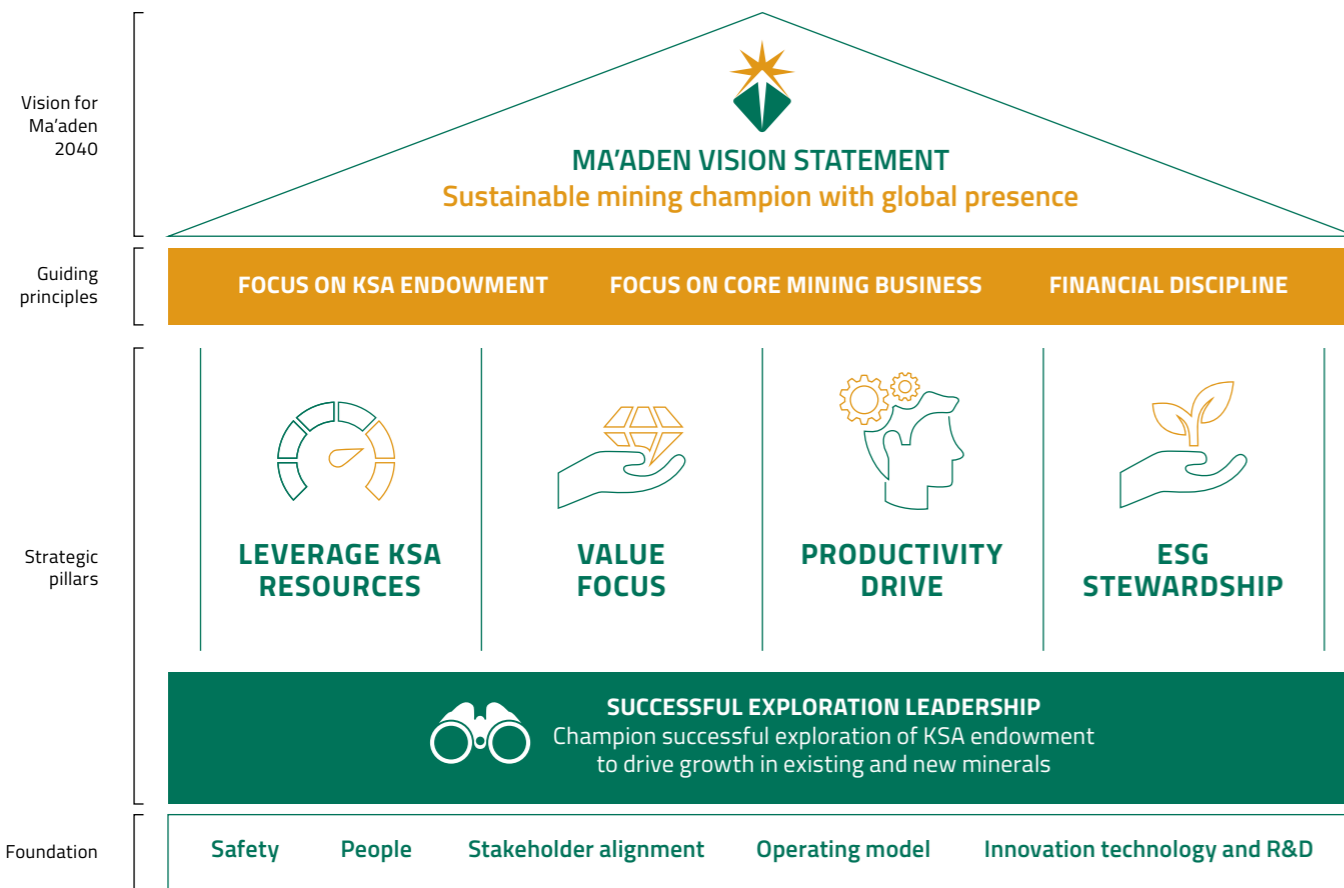
PRODUCTIVITY DRIVE

- Global top 3 fertilizer producer
- Global top 10 aluminum producer
- Diversifying portfolio of gold, base metals, and other industrial minerals

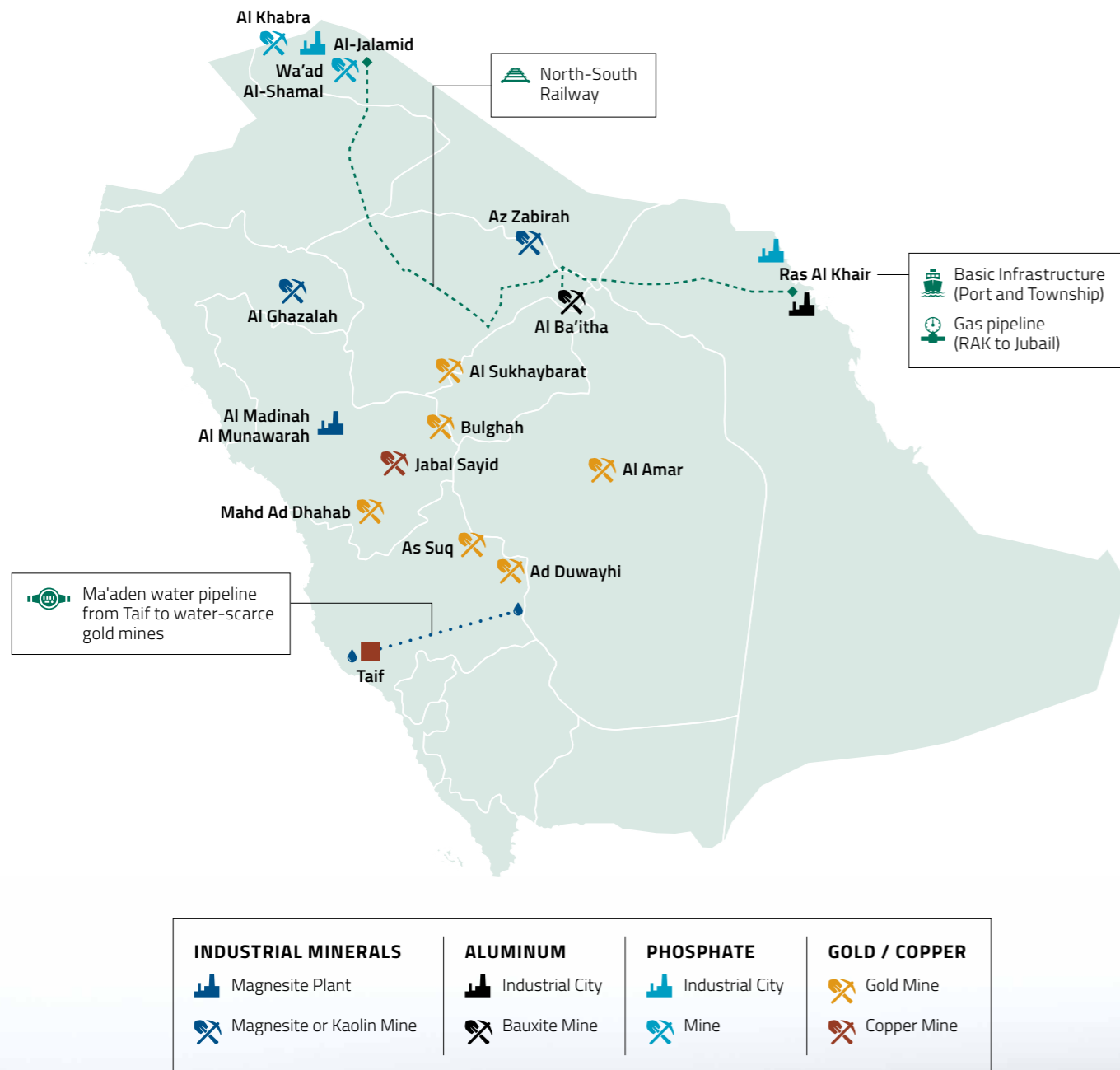


ESG STEWARDSHIP

- Achieve carbon neutrality by 2050
- Increase the proportion of women and Saudi nationals
- Incorporate ESG to supply chain



OPERATIONAL SITES



OPERATIONS AND BUSINESSES

Ma'aden operations and businesses are structured into five strategic business units (SBUs): Exploration; Gold and base metals; Phosphate; Industrial minerals; and Aluminum. Ma'aden operations also include the activities of the company's wholly-owned subsidiary Ma'aden Infrastructure Company (MIC), which undertakes a wide range of infrastructure construction and management needs of Ma'aden businesses.

This report only contains information regarding the business units that are included in this report's boundary. This report only contains information regarding the business units included in this report's boundary. For further details about Ma'aden businesses and information on business units that are not covered in this report, please refer to our web page and annual reports.

Exploration

At Ma'aden, we strive for high levels of sustainability and compliance during all of our exploration activities. For us, mineral exploration is a core component of our strategic business and growth plans and, therefore, we aim to maintain a pipeline of projects to sustain, grow and diversify our businesses in the years to come. We continue to apply for new exploration licenses as we expand.

Ma'aden currently holds various exploration licenses in Central, Western and Northern Saudi Arabia, and has undertaken extensive exploration and evaluation activities over the areas covered by these exploration licenses.

Ma'aden continues to invest heavily in modern exploration technology that are utilized globally, and which are well known and proven, such as regional airborne surveys, geochemical surveys, and remote sensing data to fully evaluate existing and new exploration areas.

BMNM

Gold was the first commodity mined by Ma'aden and proved to be a strong foundation for our subsequent growth and diversification into base metals. Our subsidiary, formally operated under the name of Ma'aden's Gold and Base Metals (MGBM), changed its name to Base Metals and New Minerals (BMNM) and oversees both gold and base metals mines, while our joint venture with MBCC is dedicated to copper operations.

As a wholly owned subsidiary of Ma'aden, BMNM generates most of its revenue from gold, while the remainder comes from copper, silver, and zinc. BMNM operates six gold mines: Ad Duwayhi, Al Amar, Bulghah & Sukhaybarat, As Suq, Mahd Ad Dhahab, and the Mansourah-Massarrah project.



Phosphate

Phosphates are a naturally occurring form of the element phosphorus, one of the three primary nutrients required for photosynthesis and crop growth. Ma'aden mines phosphate rock and processes it into diversified ammonium phosphate fertilizers products. Ma'aden is rapidly becoming one of the leading players in the global phosphate trade. Also, because the stable supply of phosphate fertilizers can support stabilizing and increasing agricultural production, we believe we are contributing to enhancing global food security by excelling in our phosphates business.

To strengthen its position, Ma'aden has relied on several subsidiaries and joint ventures to operate the phosphate business – MPC, MWSPC, MFC, MMDC, and Meridian Group.

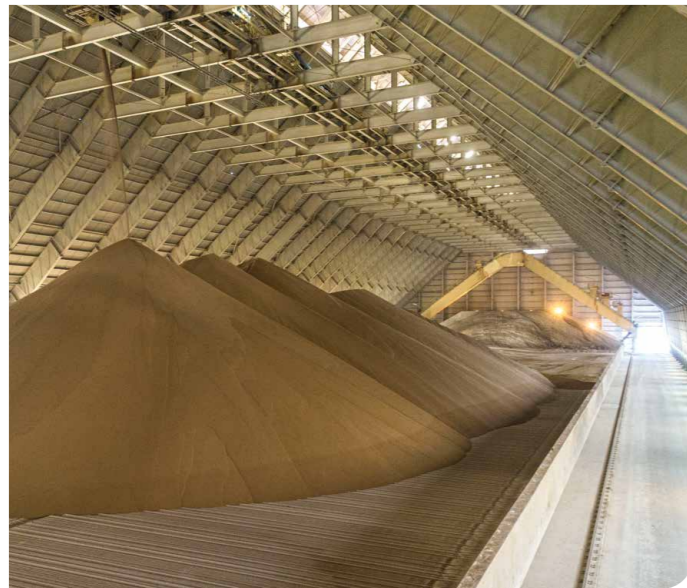
MPC (Ma'aden Phosphate Company) is a USD 5.6 billion (SAR 21 billion) joint venture investment of which Ma'aden owns 70%. It operates from two primary locations: Al Jalamid in the Northern Province of Saudi Arabia, where the Phosphate Mine and Beneficiation Plant are located, and Ras Al Khair Industrial City in the Eastern Province of Saudi Arabia, where Ma'aden's Integrated Fertilizer Production Complex is located.

MWSPC (Ma'aden Wa'ad Al Shamal Phosphate Company) is a USD 8 billion (SAR 31 billion) joint venture investment, of which Ma'aden owns 60%. It is in the Wa'ad Al Shamal Minerals Industrial City, in the Northern Province of Saudi Arabia. The complex includes seven plants and associated facilities, including a Beneficiation Plant, Phosphoric Acid Plant, and Sulfuric Acid Plant. Also, MWSPC's Ras Al Khair unit includes Di-Ammonium Phosphate and Granulation Plant.

Industrial Minerals

Industrial minerals refer to materials extracted for their commercial value, excluding fuel, metal, or gemstones. These minerals play a vital role in our daily lives, serving as key components in products ranging from construction materials and ceramics to paint and plastics.

Established as a wholly owned subsidiary of Ma'aden in 2009, IMC (Industrial Minerals Company) runs Ma'aden's industrial minerals production. It specializes in extracting and adding value to Saudi Arabia's extensive deposits of industrial minerals, including low-grade bauxite, kaolin, magnesite, and magnesia products. IMC operations include Az Zabirah, Al-Ghazallah, and Al-Madinah Al-Munawarah.



Aluminum

Aluminium, one of the world's most versatile and recyclable metals, is the third most abundant element and the most abundant metal in our planet's crust. Additionally, it is the most utilized non-ferrous metal, with its production surpassing that of all metals except iron. Furthermore, compared to other widely-used materials, such as plastics, aluminum ensures much higher recyclability, and the quality of the material does not decrease through multiple recyclings. Therefore, through our aluminum business, Ma'aden can also contribute to more sustainable material usage, and eventually to realizing a closed-loop circular economy.

Ma'aden moved into aluminum production to maximize the minerals and metals value chain. Our 'mine-to-metal' vision is to develop a new homegrown and sustainable aluminum industry, to transfer the know-how associated with it, and to position Saudi Arabia as

a strong supply-side player in global industries. For this purpose, Ma'aden is operating MBAC, MAC, MRC, and SAMAPCO as its aluminum businesses.

MBAC (Ma'aden Bauxite and Alumina Company) operates the bauxite mine and alumina refinery. Ma'aden feedstock comes from large bauxite deposits in Al Ba'itha Mine, including the mine and the ore-crushing and handling facilities. The mine's estimated production is 5 million tons of dry-weight bauxite annually. Our alumina refinery, the first in the Middle East, can produce 1.8 million tons per year of alumina.

MAC (Ma'aden Aluminium Company) operates the Smelter, located in Ma'aden's Fully Integrated High-Efficiency Aluminium Production Complex. The Smelter's annual production capacity is 740,000 tons per year of primary aluminum. Our Casthouse is integrated with the Smelter, with a total design capacity of 1.18 million tons per year, producing standard ingot, extrusion billet, and tolling slab.

MRC (Ma'aden Rolling Company) is wholly owned by Ma'aden and has a capacity of 430,000 tons per year. It currently produces can sheets, end, and tab stock for beverage can manufacturing and auto sheet for the automotive industry.

Besides exploring new projects and operating our businesses, Ma'aden acknowledges the importance of responsibly closing our projects at the end of their lifecycle. Therefore, Ma'aden will make the most efforts to protect the natural resources, community heritage, our employees, and assets when closing our projects.



CORPORATE GOVERNANCE

Ma'aden's approach to corporate governance is to maintain a robust documentary and procedural framework that ensures ongoing compliance with global leading governance practices. As a mining industry champion of Saudi Arabia and a rapidly growing global company, Ma'aden is committed to protecting the rights of shareholders and other stakeholders.

Governance Framework

Ma'aden established the Corporate Governance Framework by adopting the Corporate Governance Regulations issued by the Capital Market Authority (CMA) of the Kingdom of Saudi Arabia, and in order to ensure it remains aligned with leading practices in terms of corporate governance.

The framework provides Ma'aden's Board, management, and stakeholders with a structure along with clear policies and guidelines to ensure that the company's objectives are realized, its stakeholder expectations are managed, and the requirements of the Corporate Governance Regulations issued by the CMA are met.

Ma'aden complies with all applicable laws and regulations and ensures their efficient application through several bylaws, policies, and internal directives designed to achieve the best corporate governance practice. Also, to respect the rights of our stakeholders to be transparently informed about Ma'aden's governance structure, we are disclosing our core governance documents.

As a mining industry champion of Saudi Arabia and a rapidly growing global company, Ma'aden is committed to protecting the rights of shareholders and other stakeholders.

The Board and its Committees

Ma'aden's corporate governance structure consists of a Board of Directors and four additional functional Board Committees responsible for reviewing the company's operations within their areas of expertise and presenting their findings and suggestions to the Board of Directors. This review includes monitoring and assessing Ma'aden's sustainability and ESG performance.

The company Board, its advisors, its functional committees, company management and employees, shareholders, and direct stakeholders, are guided by the company's Corporate Governance Guidelines and Procedures and Code of Ethics.

Currently, Ma'aden's Board of Directors has created the following committees to delegate and assign authority clearly:

- Executive Committee
- Audit Committee
- Nomination and Remuneration Committee
- Safety and Sustainability Committee

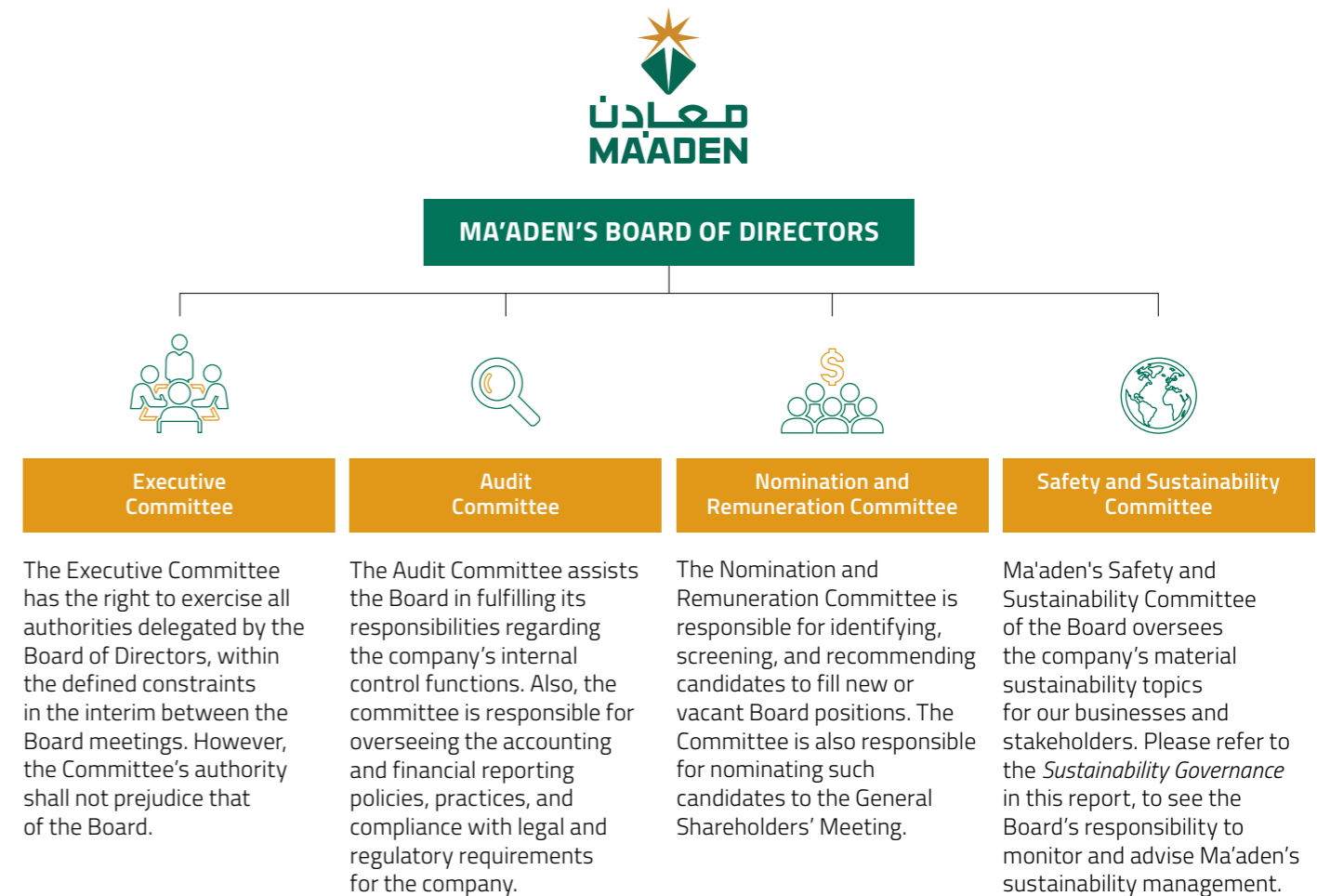
Ma'aden is transparently disclosing our Board's activity through the annual Board of Directors Report. Also, minutes of the annual and extraordinary general shareholders meeting are uploaded to our webpage.

Please refer to following pages for further details on the composition, role, performance, and compensation of our Board of Directors:

- Minutes of Shareholders Meeting (<https://www.maaden.com.sa/en/investor/shareholder>)
- Board of Directors Report (https://www.saudiexchange.sa/Resources/fsPdf/370_0_2023-03-02_09-00-12_En.pdf)



BOARD OF DIRECTORS



ENVIRONMENT, HEALTH, SAFETY, QUALITY, AND ASSET MANAGEMENT CERTIFICATION

Ma'aden is continuously making efforts to abide by the global standards in managing our operations in a way that ensures our employees' health and safety while they are fulfilling their roles and responsibilities in our business sites. Below are the environmental, health, safety, quality, and asset management related certifications we have achieved and maintained, as of December 2022.

CERTIFICATE	DESCRIPTION	CERTIFIED SINCE	MA'ADEN BUSINESS
ASI Certification	Chain of Custody	July 14, 2021	MA
ASI Certification	Performance	July 14, 2021	MA
HQS Certification	Low Risk System for the importation of fertilizers to New Zealand	April 17, 2018	MPC
IATF 16949:2016	International Automotive Task Force	2018	MA (MRC)
IFA Protect & Sustain	Product Stewardship	October 11, 2017	MPC
ISO 9001:2015	Quality Management System	December 10, 2012 December 27, 2013 March, 2019 March 3, 2020	MPC IMC MA MWSPC
ISO 14001:2015	Environmental Management System	December 10, 2012 December 27, 2013 January 9, 2017 March 3, 2020 December 20, 2022	MPC IMC MA MWSPC HQ
ISO 31000:2018	Risk Management	January 5, 2020	MPC
ISO 45001:2018	Occupational Health and Safety (OH&S) Management System	December 10, 2012 July 18, 2018 October 22, 2018 January 5, 2021 March 3, 2020 March 3, 2021	MPC MA (MBAC) MA (MAC) MA (MRC) MWSPC IMC
ISO 50001:2018	Energy Management System	December 10, 2012 December 14, 2021 May 24, 2021	MPC MA (MAC) MA (MRC)
ISO 55001:2014	Asset Management System	December 17, 2019	MPC
ISO/IEC 17025:2017	General requirements for the competence of testing and calibration laboratories	July 7, 2021 January 14, 2021 February 21, 2022	MPC MA (MAC) MA (MBAC)
Level One Bulk system	LEVEL ONE GOLD SYSTEM STATUS for bulk in-ship fertilizer	January 26, 2020	MPC
RC 14001:2015	Responsible Care Management System	February 15, 2022	MPC



CHANGING... HOW WE WORK

SUSTAINABILITY AT MA'ADEN

Ma'aden recognizes that its business activities, corporate values, and governance structure are making impacts on and are impacted by various sustainability-related topics.



SUSTAINABILITY REPORTS

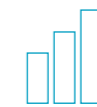
RELEVANT GRI STANDARDS

- GRI 2: General Disclosures
- GRI 3: Material Topics 2021
- GRI 308: Supplier Environment Assessment 2016
- GRI 414: Supplier Social Assessment 2016

Based on solid governance covering the oversight of the Board to the practices of all employees and contractors, Ma'aden is committed to minimizing our environmental and social footprint.



GROWING BUSINESS SUSTAINABLY 2022 ESG performance Highlights



ENVIRONMENT	SOCIAL	ECONOMIC	GOVERNANCE
<ul style="list-style-type: none"> Announced Carbon Capture and Utilization (CCU) project to recover as much as 450,000 MTPA of CO₂ emissions Obtained 138 KT of Blue Ammonia production and export certification 6MW Solar Photovoltaic (SPV) power plant installed in our Mansourah & Massarah project Continued 20-million-trees Afforestation Projects in partnership with KSA government & King Salman Natural Reserve 	<p>Health and Safety</p> <ul style="list-style-type: none"> Conducted emergency training for over 2,000 employees, 116 emergency response drills, and 117,000 equipment maintenance examinations 50% reduction in HSE Injuries in 2022 (6 total) with Zero Fatalities <p>Diversity, Equity, and Inclusion</p> <ul style="list-style-type: none"> 186 Female Nationals employed, up from 131 in 2021 	<p>Community Investment</p> <ul style="list-style-type: none"> Increased charitable giving from 25 million SAR in 2021 to 32 million SAR in 2022 8-year-continuation of School of Excellence program, with accumulative investment of 158 million SAR <p>Local Content</p> <ul style="list-style-type: none"> Localized supply chain and raw material sourcing: polyurethane-based screens, shredder cutter, calcined petroleum coke, etc. Achieved localization of scrap to 33%, up from 18% in 2021 	<ul style="list-style-type: none"> Conducted ESG topics materiality assessment and continuing comprehensive ESG stakeholder engagement process Involved in no severe ESG-related controversies and legal actions including anti-trust or anti-competitive behaviors



Our Sustainability Footprint

Ma'aden established a "Sustainability Footprint" in 2021, to continuously monitor our environmental, social, and governance-related management performance.

The ultimate aim of these goals is to become a local industrial role model in the Kingdom of Saudi Arabia while contributing to the Kingdom's ESG objectives. Additional goals still being developed include increased renewable energy sourcing, Scope 3 emissions reduction and closing any gaps in social and governance matters compared to global mining industry best-practices.

The baseline of our sustainability footprint is 2020, and our future goals are:



SCOPE 1 & 2 GHG EMISSIONS INTENSITY REDUCTION – by 37% by 2030, and 60% by 2040



GROUNDWATER USAGE INTENSITY REDUCTION – by 46% by 2030, and 65% by 2040



RENEWABLE ENERGY USAGE INCREASE – to 10% of energy mix by 2030, and 20% by 2040



FEMALE EMPLOYMENT INCREASE – to 6% of all Full-Time Employees by 2030, and 15% by 2040

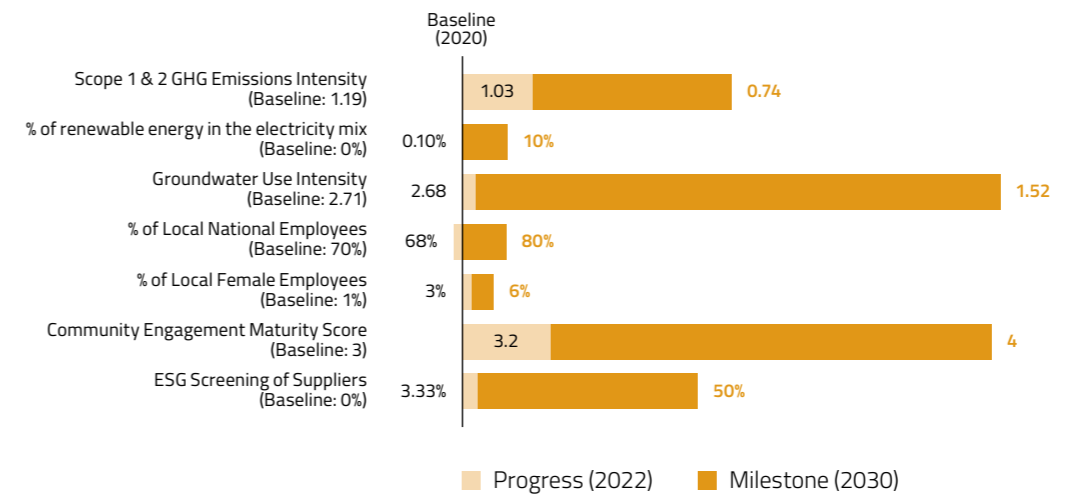


INCREASE ESG SCREENING of suppliers to 75% by 2040

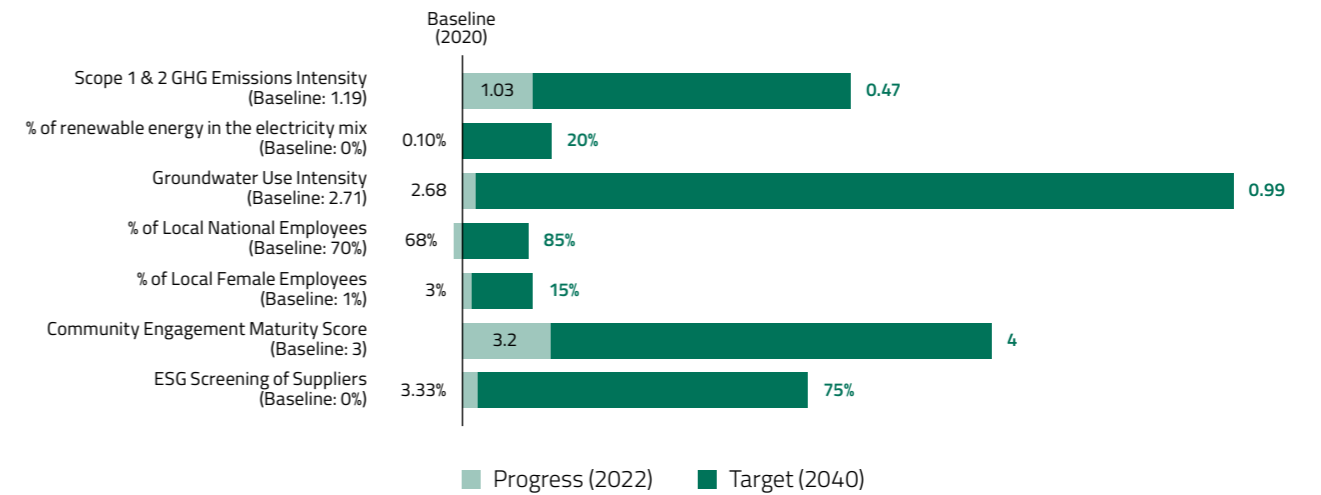
2022 Sustainability Footprint Progress

As of 2022, Ma'aden has shown the biggest progress in achieving female employment increase and Scope 1&2 GHG emissions intensity reduction. Also we are continuously enhancing our maturity in engaging with our neighboring communities. Ma'aden will continue to focus on achieving these targets as well as identifying effective and robust measures to improve our footprint in those areas where we have been less effective.

PROGRESS AGAINST MILESTONE (2030)



PROGRESS AGAINST TARGET (2040)



1) As stated in 2021 Sustainability Report, Ma'aden changed our intensity calculation to adjust commodity price fluctuations. This year and onward, Ma'aden will use the volume of production as a denominator for intensity calculation

2) Based on our annual affiliates social impact performance score



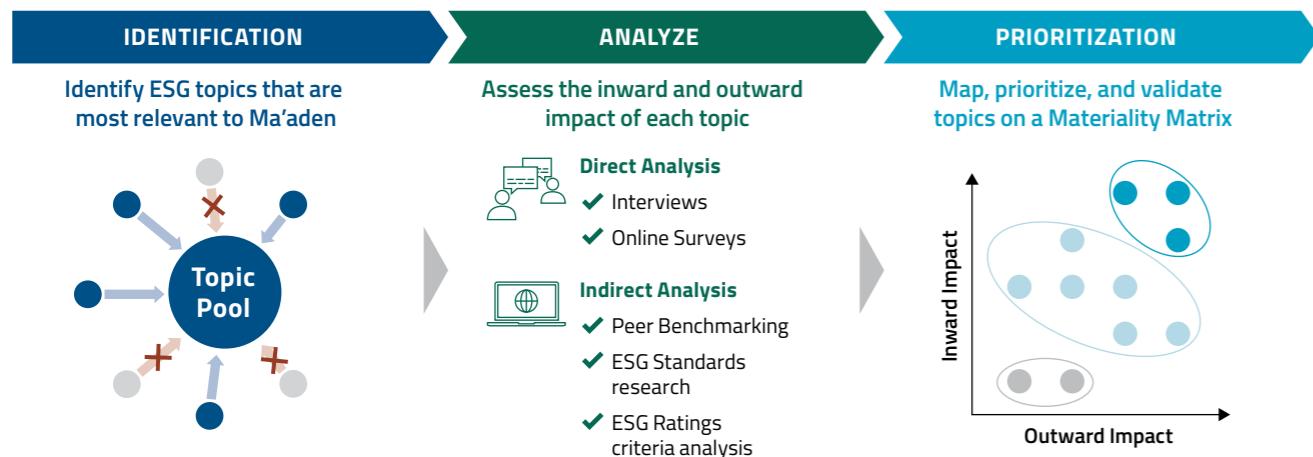
MATERIALITY ASSESSMENT

Ma'aden recognizes that our business activities, corporate values, and governance structure are making impacts on and are impacted by various sustainability-related topics.

To prioritize the most important topics for our business performance, market presence, and positions to stakeholders, Ma'aden conducted the biggest materiality assessment procedure since our first assessment in 2019, with the consultation of internal and external sustainability experts.

Especially in this year's materiality assessment, we applied procedures to capture our major stakeholders' perceptions on 1) how much Ma'aden is impacted and 2) how much Ma'aden impact on environment and society. These procedures were to reflect the recently arising concept of 'Double Materiality' in our assessment.

MATERIALITY ASSESSMENT PROCEDURE



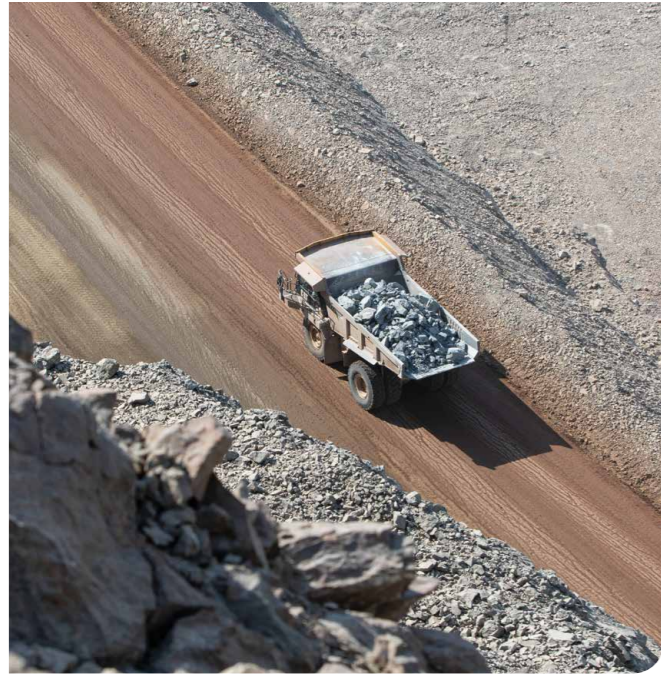
IDENTIFICATION OF 'LIKELY MATERIAL' SUSTAINABILITY TOPICS

Sustainability topics can be defined variously, considering the context of business activities. However, because not all sustainability topics are relevant to every business, Ma'aden prepared a short list of sustainability topics that are likely to be material to our business activities.

For this distillation, we searched 1) which topics are included in our previous sustainability reports, 2) which topics are included in sustainability reports covered by other companies that are conducting the same type of operations as Ma'aden, or which are similar businesses to Ma'aden, and 3) which topics are covered by sustainability reporting frameworks and ESG ratings that are relevant for Ma'aden. As a result, the following sustainability topics were selected to be 'likely material' ones for Ma'aden:

MATERIAL TOPICS REDEFINED IN 2022

- | | |
|---|--|
| <p>1 Board's oversight on managing ESG matters: Assigning Board members' role and responsibility to oversee sustainability topics that are material to the organization</p> <p>2 Composition and diversity of the Board: Composing a governing body that is capable of managing and guiding the organization's performance on all of its material sustainability topics</p> <p>3 Evaluation and compensation of the Board: Aligning the Board's commitment to the organization's value by connecting Board's performance to our material sustainability topic managements</p> <p>4 Incorporating ESG to the whole value chain: Establishing awareness on material ESG topics and promoting sustainable practices within the organization and throughout supply chain.</p> <p>5 Site expansion, reclamation & closure: Closing assets and facilities and rehabilitating operational sites at the end of commercial use, managing the impacts on the environment, local communities, and workers</p> <p>6 Compliance to rules, regulations, and laws: Conducting business practices by abiding with all applicable business rules, regulations, and laws to keep highest level of ethics</p> <p>7 Engaging internal and external stakeholders: Identifying key stakeholders to the business and including them in important decision makings (including labor relations)</p> <p>8 Air quality: Non-greenhouse gas air emissions (e.g., Hazardous air pollutants, criteria air pollutants, and volatile organic compounds from smelting and refining activities)</p> <p>9 Response to the climate change: Reducing direct and indirect GHG emissions through optimizing energy consumption and mining operations</p> <p>10 Biodiversity: Minimizing and recovering the company's negative impact on nature ecosystems around its business operations (landscapes, plants, wildlife habitats, etc.)</p> | <p>11 Community relations and social initiatives: Socioeconomic, cultural, health, and human rights impacts of the company on its surrounding local communities.</p> <p>12 Rights of indigenous people: Minimizing negative impacts on the basic rights and living conditions of the people who have inhabited the area where the company operates its business</p> <p>13 Local content development: How the value the company generates affects economic systems (e.g., Developing local economy by procurement practices and employment of workers, etc.)</p> <p>14 Diversity and inclusion: Forbidding discrimination, ensuring equal opportunities, and encouraging inclusive culture among the company's employees</p> <p>15 Employee training and development: Providing opportunity for employees to learn and practice essential work-related and management-related skills, knowledge, etc.</p> <p>16 Talent attraction and retention: Keep attracting, engaging, and retaining talented & skilled labor forces for the company's businesses</p> <p>17 Health and safety: Protecting employee health and safety, and to create a culture of safety and well-being among employees at all levels</p> <p>18 Crisis management and emergency preparedness: Preventing, mitigating, and recovering the damage of significant operational hazards (e.g., Failures in structural integrity of tailings storage facilities, etc.)</p> <p>19 Waste management: Proper disposal or storage of hazardous materials or mining waste (e.g., Waste rock, tailings, slurries, slags, sludges, smelting, and other industrial wastes including toxic chemicals)</p> <p>20 Water management: Reducing water use and contamination (e.g., Operation optimization, desalination, water recirculation, innovative waste-disposal solutions, etc.).</p> |
|---|--|



Analyzing the impacts regarding each topic

Among the 20 likely material topics above, topics related to Ma'aden's governance and business excellence are foundational to our sustainability management. Therefore, we did not map the topics listed below on our materiality matrix because those topics should be introduced in our report regardless of their materiality:

- Board's oversight on managing ESG matters
- Composition and diversity of the Board
- Evaluation and compensation of the Board
- Incorporating ESG into the whole value chain
- Site expansion, reclamation & closure
- Compliance to rules, regulations, and laws
- Engaging internal and external stakeholders

To collect insight regarding 1) how much Ma'aden's business can be impacted (Inward Impact) and 2) how much Ma'aden can impact the environment and society (Outward Impact), Ma'aden engaged directly and indirectly with key stakeholders.

The definition of Ma'aden's key stakeholder groups is as follows:

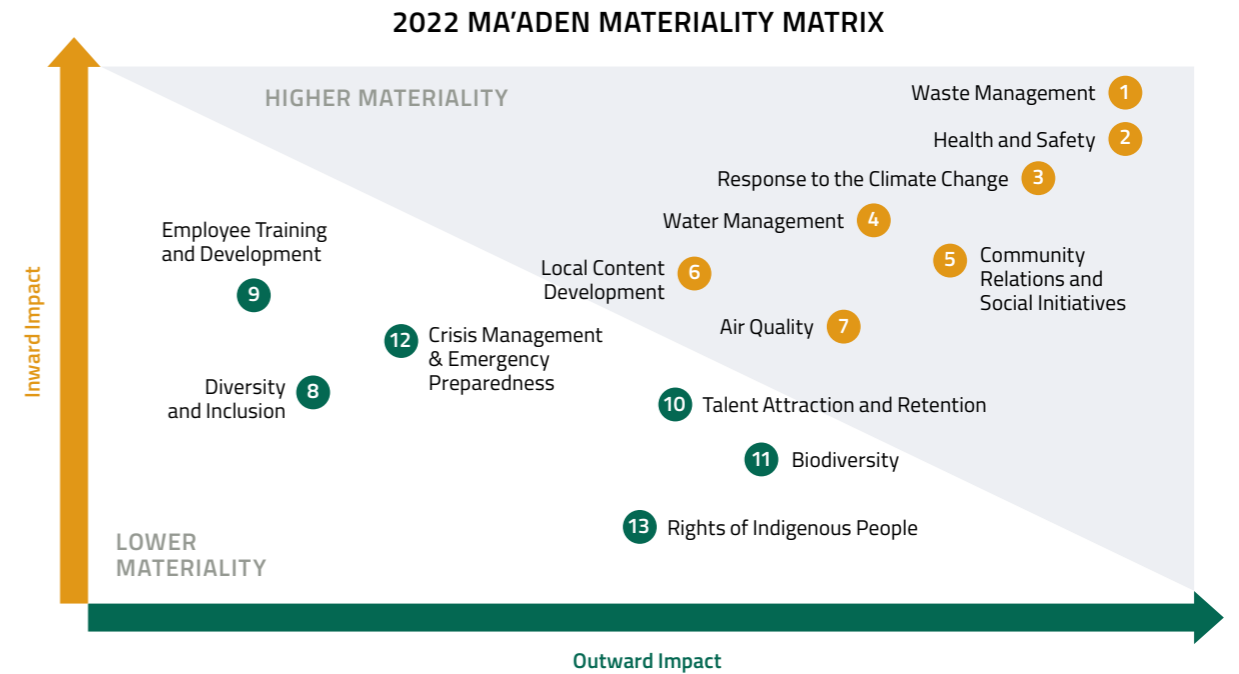
MA'ADEN KEY STAKEHOLDER GROUPS

8 Stakeholder Groups were evaluated to understand their significance to Ma'aden's Materiality Assessment

STAKEHOLDER GROUPS		DEFINITION
Internal	Employees and contractors	Individuals that are employed either full-time or part-time by Ma'aden
Business	Joint venture partners	Entities that are conducting businesses in collaboration with Ma'aden
	Investors, analysts, and shareholders	Those who either own equity or assess performance on behalf of investors
	Suppliers	Entities that source and distribute Ma'aden's products across the value chain
	Customers	Entities that purchases Ma'aden's products for their businesses
Broader	Government and regulatory bodies	Government bodies that oversee Ma'adens regulatory compliance
	Local communities	Communities impacted by Ma'aden's operations
	Non-governmental organizations	Entities set agendas on businesses' impact on communities and the planet

Prioritizing the ESG topics based on their impacts

Based on the direct and indirect engagement with the stakeholders, Ma'aden collected perspectives on our inward and outward impact. Then each topic is mapped in the materiality matrix as below:



Though all topics are relevant and important enough to be included in this report, topics mapped on the matrix can be grouped as follows, to decide how each group should be disclosed in this report.

- **Topics with higher impacts** – Air quality, Community relations and social initiatives, Health and safety, Local content development, Response to the climate change, Waste management, and Water management.

These topics will be highlighted as an independent section, with an introduction to how we are managing those topics and what are major achievements during the reporting period.

- **Topics with lower impacts** – Biodiversity, Crisis management & emergency preparedness, Diversity and inclusion, Employee training and development, Rights of indigenous people, and Talent attraction and retention.

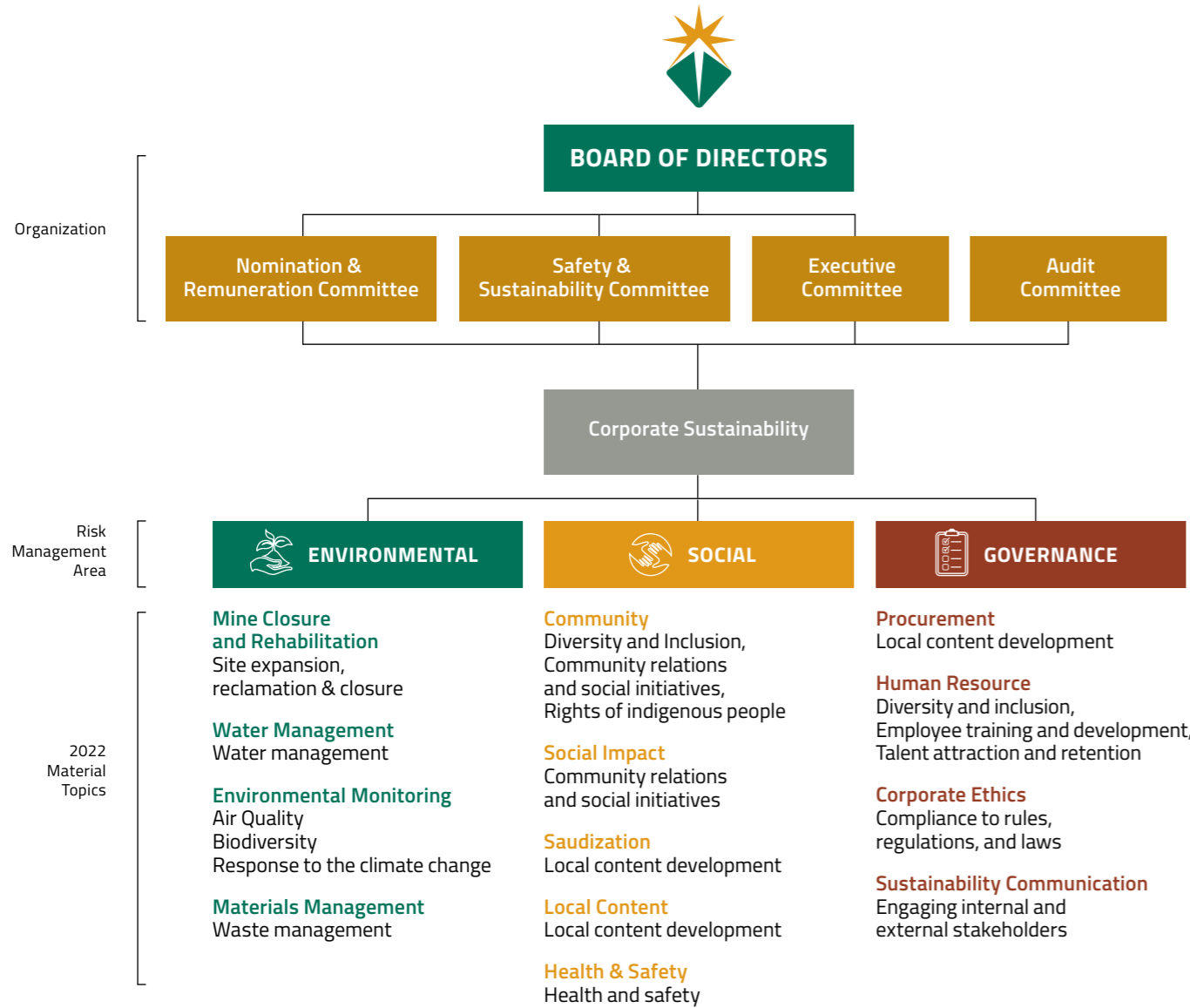
This report will not have dedicated sections to cover these topics unless the topic is directly related to our sustainability framework. However, Ma'aden's major achievements regarding these topics are introduced under other sections that cover the foundational information and topics with higher impacts.

To internalize the material sustainability topics among all of Ma'aden's management and value chain, we will be continuing internal and external stakeholder engagement through a series of workshops and focus groups in 2023.

ESG RISK MANAGEMENT

Ma'aden is well aware that excellence in managing material environmental, social, and governance topics starts from timely identifying and proactively mitigating risks that are corresponding to significant risks. To serve this purpose, Ma'aden has established an operating Governance, Risk, and Compliance (GRC) framework that sets out our company-wide approach to responding to material ESG risks with consistency and transparency.

ESG RISK MANAGEMENT AT MA'ADEN



ESG INCORPORATIONS

Ma'aden is committed to a culture of operational and business excellence. We hold ourselves to world-class performance standards and leverage robust and relevant metrics and key performance indicators to track, manage, and disclose our performance in a range of Environmental, Social, and Governance (ESG) issues that are material to our business and central to our growth strategy.

Sustainability Governance

Our sustainability priorities and initiatives are guided by our management team and are informed by the needs and opportunities of our local communities. This structure allows us to integrate sustainability as a group-wide imperative while also allowing us to invest in targeted local programs and share learnings from community initiatives across our portfolio.

MA'ADEN'S SUSTAINABILITY GOVERNANCE

SUSTAINABILITY FUNCTION	BOARD	Board Committee	<ul style="list-style-type: none"> Oversee and govern the Sustainability Framework and its implementation Monitor overall company sustainability performance
	CORPORATE	CEO	<ul style="list-style-type: none"> Chair the corporate Sustainability Committee Actively engage stakeholders and ensure visibility by promoting sustainability practices Report overall sustainability performance to the Board of Directors by promoting sustainability practices
		Corporate Committee	<ul style="list-style-type: none"> Own sustainability risk Integrate Sustainability Framework in the overall business model and strategy Oversee performance of the business Allocate resources Promote a culture of sustainability across Ma'aden and its affiliates
	AFFILIATES	Affiliates Committee	<ul style="list-style-type: none"> Integrate Sustainability Framework in the business model Prepare strategy, business plan, organizational architecture, and budget Oversee business performance Allocate resources Report sustainability KPIs and metrics to Ma'aden's Corporate Committee
Business Unit Management		<ul style="list-style-type: none"> Continually improve the organizational capacity to deliver Implement Sustainability Framework Engage relevant stakeholders Manage and maintain sustainability data Prepare periodic reports 	
			<ul style="list-style-type: none"> Engage corporate stakeholders Advise the Board and management on sustainability strategy and practices Assure the performance of business Manage annual sustainability reporting and disclosure

SUSTAINABILITY FRAMEWORK

In 2019, we developed a company-wide Sustainability Framework which adopts leading global practices, standards, frameworks, and guidelines, and outlines our commitment and approach to sustainability management. Drawing from our various learnings and strategic focus areas over the years, we have prioritized the well-being, health, and safety of our employees, invested in the socioeconomic development of our local communities, and endeavored to protect our natural environment.

Our Sustainability Framework provides clear guidance for commitments, policies, and expectations to improve governance, disclosure, and impact of ESG issues. This allows us to continue to strengthen our contribution to the achievement of Vision 2030 and United Nations Sustainable Development Goals (UN SDGs), and to align with the International Council on Mining and Metals (ICMM) and other relevant international mining standards.



Our Sustainability Framework provides clear guidance for commitments, policies, and expectations to improve governance, disclosure, and impact of ESG issues.

Ma'aden's Sustainability Framework demonstrates our commitment to eight major sustainability goals:

- 1 Create a "zero harm" work environment and strengthen the safety culture of our employees, contractors, customers, and host communities.
- 2 Provide employees with a nurturing environment that improves their health and wellbeing.
- 3 Be a welcomed neighbor, respecting human rights and maintaining meaningful relationships with our host communities globally.
- 4 Contribute positively to the economy in our host countries and local communities in which we operate.
- 5 Continue to be a steward for responsible water management practices and provide innovative solutions to water scarcity, ensuring that community water systems are not affected by our operations.
- 6 Evolve our business practices to pioneer new thinking, technology, and business models to ensure climate resilience, ecological preservation, and environmental justice at each of our businesses.
- 7 Strive to reduce waste and impact associated with our sourcing, operations, and materials across our value chain and throughout our products' lifecycles.
- 8 Gain international recognition for being a sustainable company, driven by robust business practices, innovation, and values.

To achieve these goals, Ma'aden is:

- ▶ **ADOPTING A LEADERSHIP MODEL THAT INSPIRES A CULTURE OF SUSTAINABILITY INTERNALLY AND CREATES INFORMED LEADERS WHO ACTIVELY REPRESENT THE COMPANY AS A SUSTAINABILITY CHAMPION.**
- ▶ **IMPLEMENTING OUR SUSTAINABILITY FRAMEWORK THROUGH PROMOTING TRANSPARENCY, CONSISTENCY, AND ACCOUNTABILITY.**
- ▶ **EMPOWERING AND HOLDING EACH BUSINESS ACCOUNTABLE TO HAVE THE CAPACITY TO IMPLEMENT SUSTAINABLE PRACTICES THAT FIT ITS SCALE, NATURE, AND RISK PROFILE.**

Implementation of Sustainability Framework

As we implement the Sustainability Framework across Ma'aden, we empower our affiliates to own and advance Ma'aden's sustainability efforts toward our unified goals. One way of achieving such empowerment is aligning our internal standards, rules, and policies to the framework and constantly building awareness about them among the employees of all our organizations.

MA'ADEN INTERNAL STANDARD		1. Business Excellence	2. Health Safety & Security	3. Employee Wellness	4. Community & Human Rights	5. Economic Contributions	6. Water Stewardship	7. Climate Change & Biodiversity	8. Tailings & Materials Management
ENVIRONMENTAL	Mine Closure and Rehabilitation Policy	●							
	Water Recovery Plan						●		
	National Engineered Wastewater Treatment (NEWT)						●		
	Environmental Monitoring Program							●	●
	Materials Handling and Storage Code of Practices								●
	Hazardous Materials Management Standard								●
SOCIAL	Community Management System (CMS)	●	●		●				
	Ma'aden Suggestions System (MASS)	●							
	Social Baseline and Impact Assessment (SBIA STD)								
	Community Engagement Framework (CEF)				●	●			
	Local Content Standard (LC STD)					●			
	Saudization Terms and Conditions					●			
	Social Investment Standard					●			
Supply Chain Workforce Initiative					●				
GOVERNANCE	Code of Conduct	●		●	●				
	Group Risk Policy & Standard	●	●		●				
	Procurement Manual	●				●			
	Sustainability Communication Standard (SC STD)	●	●	●	●	●	●	●	●
	SafeSTEPS Program		●						
	Environment, Health & Safety Policy		●				●		
	EHSS Management System (MSHEM)		●				●		●
	Traffic and Vehicle Safety Standard		●						
	HR Guideline			●					
	HR Policy Manual			●					



COMPLIANCE & CORPORATE ETHICS

Integrity is a fundamental for Ma'aden, and as one of our four guiding core values, we hold ourselves to the highest standards of honesty, fairness, and ethical business conduct in all our interactions with customers, stakeholders, and each other. We strive to foster a culture that is deeply committed to maintaining these principles and upholding our reputation for integrity.

At Ma'aden we conduct our business in compliance with all applicable laws, local regulations, and our values, including anti-corruption practices and regulations, codes of conduct donations, data privacy, and transparency. We have consistently fostered an ethical corporate culture focused on our core values.

Code of Conduct

Ma'aden has a comprehensive Code of Conduct that provides a framework and a set of guidelines for carrying out the company's business ethically and is administered by a corporate-level Compliance Department comprised of senior Compliance Officers who monitor and evaluate operational and employee conformity.

The Code of Conduct is applicable and distributed to all Ma'aden employees and everyone with whom Ma'aden does business with. It sets forth the company's policies, standards, and norms of behavior for workplace conduct, business practices, the safeguarding of information and property, and for communicating with the government, local communities, and the media. We have a similar code of conduct for suppliers and partners which is integral to the supplier onboarding process and sets out expectations for integrity and ethical behavior.

Regulatory compliance is managed and monitored through a robust Compliance Management System, and an independent compliance hotline is maintained through a partnership with a leading global provider of integrated risk and compliance management platforms.

Further details on Ma'aden's Code of Conduct can be found in our [website](#).

Ethics Monitoring

To ensure effective internal application of our standards, we monitor ethical practices and engage with project managers on a regular basis. Additionally, an independent, 24/7 whistleblower hotline and email, first implemented in 2012, are available to all internal and external stakeholders, including contractors, subcontractors, suppliers, clients, and advisors.



ESG VALUE CHAIN

Ma'aden acknowledges that we are only a part of a large and complex supply chain of the mining industry. Therefore, we are aware that enhancing the sustainability of our operation is the minimum of making our businesses more sustainable. For the sustainability of our business as a whole, responsible supply chain management is critical. Hence, Ma'aden insists that our suppliers meet our standards for ethics and integrity, as well as industry benchmarks related to environmental, social, and governance issues.

Supplier Questionnaire

To ensure environmentally and socially sustainable behavior in our supply chain, Ma'aden developed a supply chain questionnaire in 2022 and collected responses from our suppliers.

The questionnaire is designed to collect our suppliers' self-answered information regarding their management and performance of environmental and social topics, through a combination of multiple-choice and open-ended responses to four categories of questions.

Also, through this questionnaire, we introduced Ma'aden's Supplier Code of Conduct and ensured all suppliers sign it.

The categories of questionnaires are as follows:

General Information

- General profile of responding supplier's business and organization

Sustainability

- Questions on how systemically a responding supplier is managing important sustainability topics: environment, energy, greenhouse gases (GHG), water, waste, health & safety, human rights

- Whether the responding supplier has signed on Ma'aden's supplier code of conduct

- How the responding supplier is managing its own supply chain sustainability

Environment

- Performance data regarding the responding supplier's energy consumption, GHG emission, water usage, and waste generation

Community

- Performance data regarding the responding supplier's occupational health & safety, business ethics, supply chain sustainability, and community investment

In 2022, Ma'aden distributed the questionnaire to a total of 107 suppliers, of which 103 companies responded.

According to the survey, more than **80% OF SUPPLIERS** that responded are implementing an environmental management system

90% OF SUPPLIERS are implementing a health and safety management system

95% OF SUPPLIERS have incorporated human rights in their policies

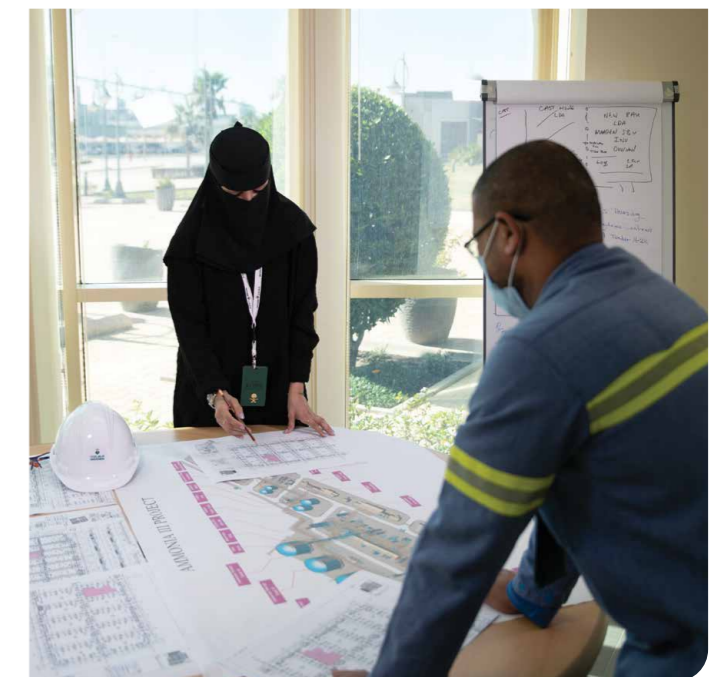
In 2022, Ma'aden distributed the questionnaire to a total of 107 suppliers, of which 103 companies responded. According to the survey, more than 80% of suppliers that responded are implementing an environmental management system, 90% of suppliers are implementing a health and safety management system, and 95% of suppliers have incorporated human rights in their policies. Also, a total of 77% of respondents had already signed on to the supplier code of conduct, and the rest were required to sign on through the survey.

Supplier Code of Conduct

Ma'aden's Procurement Standard and Supplier Code of Conduct cover both affiliates and third-party suppliers, and detail our expectations related to lawful behavior, business ethics, Saudization, risk management, health, safety, the environment, and other pertinent issues that ensure Ma'aden's competitive standing and reputation are protected. Ma'aden's supplier code of conduct is applied not only to suppliers of materials and manufacturing-related services, but also non-manufacturing related services including facilities operations, security, etc.

Supplier Management Relationship

The company maintains a Supplier Management Relationship (SMR) system to track and report on our supplier and affiliate compliance to these standards and has processes in place to help it efficiently identify and mitigate shortcomings. At the corporate level, corporate procurement and due diligence when onboarding suppliers, and oversee strong, ongoing supply chain risk management processes.



BUSINESS INNOVATION

At Ma'aden, we strive on a daily basis to reduce water usage and intensity and to cut carbon emissions, while finding innovative ways to extend life cycles through recycling and reuse of both mined products and tailings. We promote the use of recycled or secondary materials over virgin materials wherever possible, and we leverage innovation in manufacturing and design to increase the circularity of our products and explore and prioritize new opportunities to promote the use of recycled materials through design and innovation in technology and business models.

Technology & Innovation (T&I)

Ma'aden continues to enhance sustainability by minimizing its environmental footprint and maximizing its societal contributions through a persistent focus on innovation. Our T&I department has been tasked with scouting and assessing technologies and solutions that address current business needs and support Ma'aden's long-term strategy.

T&I operates under three dedicated ESG-focused themes: Sustainable Processes, Low Carbon Products, and Safety Technology. Herein, we highlight our key initiatives under some of the ESG material areas:

Waste Management

We are deeply aware of the challenge that waste, specifically phospho-gypsum from phosphate mining and red mud from bauxite mining, presents. These waste products should be reprocessed and repurposed, reducing the need for storage which has needed to be expanded over time. A primary focus is the monetization of waste by-products from our processes, aiming to transform what was once considered waste into value-adding products. In phosphate we are pioneering a solution to alleviate waste issues by calcining phosphogypsum. Additionally, We're exploring technologies to valorize red mud waste from bauxite operations and assessing alternatives for leaching agents in gold processing to create value while adhering to sustainable practices.



Water Management

Given our operation in water-scarce regions, responsible water management is vital. We are committed to the careful stewardship of this precious resource. We are currently engaging in comprehensive analyses of various tailings dewatering and material handling options in phosphate, an initiative aimed at dry stacking of tailings and recycling water back into the process plant. Notably, we've successfully integrated a solar power solution at our Mansourah-Massarrah gold project and have begun reusing treated wastewater on a large scale. Our objective is to recover and reuse water in our processes both efficiently and sustainably, emphasizing our commitment to technological innovation in water management.

GHG Management

Mitigating our greenhouse gas emissions is a priority for us, prompting ongoing exploration of novel technologies aimed at CO₂ capture and emission reduction. Among our initiatives, we are delving into innovative carbon capture solutions for smelter exhaust streams and charting a strategic roadmap for our fleet's electrification. We are planning to engage in trials of potentially ground-breaking and more energy-efficient comminution techniques. We're also concurrently testing advanced non-destructive assaying technology for gold to minimize both hazardous exposure and emissions.

Health and Safety Management

Our commitment to the safety and well-being of our employees remains paramount. We're exploring the adoption of advanced technological solutions like operator alertness systems, collision avoidance systems, and early detection methods for sinkholes to ensure safer mining operations. Furthermore, the implementation of drone technology for surveying has proven effective in minimizing personnel exposure to high-risk environments while enhancing operational efficiency.

Overall, these initiatives demonstrate our commitment to managing the ESG challenges thoroughly. Through a combination of technology, innovation, and sustainable practices, we are working towards achieving our sustainability goals and contributing towards a more sustainable future.



STAKEHOLDER ENGAGEMENT

Besides the stakeholder engagement we performed for creating this report, Ma'aden engages formally and informally on an ongoing basis with our key stakeholders, which are defined in this report's Materiality Assessment section.

Employees

With our employees, Ma'aden focuses on how the company and employees be responsible to each other and how to support the growth of each other. We also discuss ways for employees to be aware of, act on, and be advocates for, Ma'aden's sustainability commitments.

Suppliers and Partners

With our suppliers and partners, we strive to find ways of working together to develop and maintain transparency and accountability across the value chain. For this purpose, Ma'aden expects timely reporting and disclosure from our suppliers and partners. Of course, Ma'aden is also committed to engaging with suppliers and partners regarding our significant management decisions.

Investors and Shareholders

Through channels, including annual shareholders meetings and investor relations activities, Ma'aden regularly engages with our investors to transparently disclose our business performance and significant managerial decisions that will impact them. Besides those, Ma'aden is constantly responding to our investors' requests for information disclosure, to respect their rights as shareholders.

Customers

Voices of customers are critical indicators of how Ma'aden is performing now and how sustainable our success will be. Therefore, Ma'aden acknowledges the importance of carefully listening to our customers' opinions and responding promptly. Ma'aden engages with customers to check their satisfaction and act on innovating our businesses to keep them satisfied. Through our customer compliant management procedures, Ma'aden has resolved 100% of customer complaints and issues raised throughout the latest three years.

Government and regulatory bodies

As a role model of the kingdom's mining industry, Ma'aden is responsible for adherence to the laws, rules, and regulations that our government sets to control the behaviors of businesses in Saudi Arabia. Therefore, Ma'aden engages with these stakeholders to become better aware and ready for major regulations, and to increase transparency regarding our business activities.

Local Communities

Local communities are the basis that provides infrastructure, human resources, and potential markets to businesses. Therefore, the development and prosperity of local communities will positively impact businesses' sustainability. With local communities, Ma'aden seeks the best ways we can help them, give priority to local Saudis in hiring, develop local supply chains, and invest in economic development.

Non-Governmental Organizations (NGOs)

NGOs raise influential agendas for global society to consider, and often they act as monitors of businesses watching how companies behave on topics of their interests for stakeholders. To capture the interests of our stakeholders and to proactively respond to significant global sustainability agendas, Ma'aden carefully refers to NGO's initiatives and communications.





These engagement commitments reflect our values, allow internal and external stakeholders to hold us accountable, and are an essential element in making our business sustainably competitive.



UNGC Commitment

The United Nations Global Compact (UNGC) is one of the globally renowned initiatives that aims to get business organizations worldwide to adopt sustainable policies, practices, and disclosures on their behaviors. As one of our efforts to achieve the vision of becoming a sustainable mining champion with a global presence, Ma'aden is also committed to aligning our business practices with the ten principles of UNGC.

Ten Principles of UNGC are as follows:

 HUMAN RIGHTS	 LABOUR	 ENVIRONMENT	 ANTI-CORRUPTION
<p>Principle 1. Businesses should support and respect the protection of internationally proclaimed human rights; and</p> <p>Principle 2. Make sure that they are not complicit in human rights abuses.</p>	<p>Principle 3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;</p> <p>Principle 4. The elimination of all forms of forced and compulsory labor;</p> <p>Principle 5. The effective abolition of child labor; and</p> <p>Principle 6. The elimination of discrimination in respect of employment and occupation.</p>	<p>Principle 7. Businesses should support a precautionary approach to environmental challenges;</p> <p>Principle 8. Undertake initiatives to promote greater environmental responsibility; and</p> <p>Principle 9. Encourage the development and diffusion of environmentally friendly technologies.</p>	<p>Principle 10. Businesses should work against corruption in all its forms, including extortion and bribery.</p>



As one of our efforts to achieve the vision of becoming a sustainable mining champion with a global presence, Ma'aden is also committed to aligning our business practices with the ten principles of UNGC.

ALIGNMENT WITH GLOBAL/LOCAL SUSTAINABILITY GOALS

In selecting material sustainability topics, Ma'aden considered how we should align our management of each topic with contributing to achieving global and the kingdom's sustainability goals. The table below shows which topic is relevant to which sustainability goals.

MATERIAL TOPICS	UN SDGS	UNGC 10 PRINCIPLES	ICMM PRINCIPLES	SAUDI VISION 2030	NATIONAL STANDARD FOR SUSTAINABILITY
Board's oversight on managing ESG matters			2		▪ Sustainability Governance
Composition and diversity of the Board	5 10	6	3		▪ Governance and Board of Directors
Evaluation and compensation of the Board					▪ Governance and Board of Directors
Incorporating ESG to the whole value chain					▪ Sustainability Strategy
Site expansion, reclamation & closure	12 14 15		3 6 9		
Compliance to rules, regulations, and laws		10	1	▪ Foster Islamic Values	▪ Ethics and Integrity ▪ Protecting Integrity and Combating Corruption ▪ Anti-competitive behavior
Engaging internal and external stakeholders	8	3 4 5 6		▪ Further Integrate Saudi Economy Regionally and Globally	▪ Engaging Stakeholders
Air quality	12	7 8 9	6	▪ Ensure Environmental Sustainability	
Response to the climate change	13	7 8 9	6	▪ Ensure Environmental Sustainability	▪ Energy consumption and natural resources ▪ Energy ▪ Emissions
Biodiversity	14 15	7 8 9	7	▪ Ensure Environmental Sustainability	▪ Biodiversity
Community relations and social initiatives	1 4 9 11		9	▪ Enable Social Contribution of Businesses ▪ Enable Larger Impact of Non-Profit Sector	▪ Local Community Development
Rights of indigenous people	3 11 14 15	1 2	3		
Local content development	8	6	9	▪ Develop Human Capital in line with Labor Market Needs	
Diversity and inclusion	5 10		3	▪ Ensuring Equal Access to Job Opportunities	▪ Diversity, Equal Opportunities, and Non-Discrimination
Employee training and development	4 8			▪ Create an Empowering Environment for Saudis	▪ Training and qualifying workers
Talent attraction and retention	8	1 2		▪ Develop Human Capital in line with Labor Market Needs ▪ Attract Relevant Foreign Talents for the Economy	▪ Employment Policy and Regulation ▪ Change in Work Practices – Human Resources
Health and safety	3 8		5		▪ Occupational Health and Safety
Crisis management and emergency preparedness	3		4		
Waste management	12	7 8 9	6 8	▪ Ensure Environmental Sustainability	▪ The materials used
Water management	6	7 8 9	6	▪ Ensure Environmental Sustainability	▪ Water and Liquid wastes ▪ Effluents/Liquid waste and residues

UN SDGs (<https://www.un.org/sustainabledevelopment/sustainable-development-goals/>)
 ICMM Principles (<https://www.icmm.com/en-gb/our-principles>)

CHANGING... THE FUTURE

PROTECTING OUR ENVIRONMENT

Ma'aden aspires to evolve our business and practices to pioneer new thinking, technology and business models to ensure climate resilience, ecological preservation and environmental justice.

RELEVANT GRI STANDARDS

- GRI 301: Materials 2016
- GRI 302: Energy 2016
- GRI 303: Water and Effluents 2018
- GRI 304: Biodiversity 2016

Understanding the high impact that the mining business makes on the natural environment, Ma'aden strives to minimize our footprint on carbon emissions, air quality, water, and biodiversity.



CLIMATE CHANGE AND BIODIVERSITY

Ma'aden aspires to evolve our business and practices to pioneer new thinking, technology and business models to ensure climate resilience, ecological preservation and environmental justice. Tracking and reducing GHG emissions, energy efficiency and Ma'aden's biodiversity and ecological impact are required for sustainability reporting and are relevant to Ma'aden's material and alignment with global standards and frameworks.

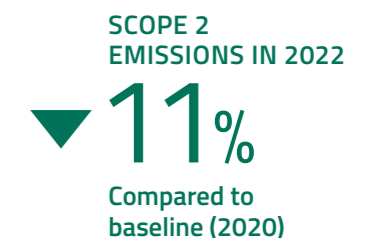
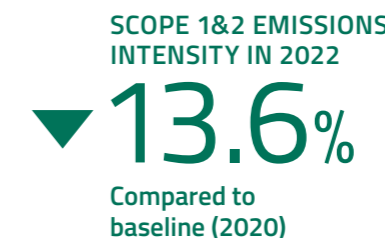
Energy Usage and GHG Emissions

At Ma'aden, we are committed to reducing greenhouse gas (GHG) emissions across our entire value chain. Minimizing emissions, reducing leaks, and making more efficient use of all energy sources are high-priority business goals for Ma'aden as we seek to continue sustainably building the Saudi mining industry.

2022 performance

Ma'aden's direct CO₂ emissions increased in 2022, due to the increased volume of production. However, we kept our effort to enhance the efficiency of managing our facilities and successfully reduce the energy-indirect (Scope 2) emissions by 14% in the same period. As a result, Ma'aden's total on-site carbon intensity has decreased comparing to the baseline (2020). These reflect our ability to effectively monitor and manage our operations and business functions.

In addition to increasing operational excellence in our sites, we keep striving to further reduce our GHG emissions. One example of carbon emission reduction endeavor is the installation of solar panels in our gold business's Mansourah & Massarah projects.



CLIMATE CHANGE AND BIODIVERSITY

2022 performance

The 6MW-capacity-Solar Photovoltaic (SPV) power plant installed in our Mansourah & Massarah project consists of PV modules, copper cables, Junction Boxes, Inverters, IDT station, SCADA, PV Hybrid Controller. With this solar energy plant, this will become the first mine in Saudi Arabia to use solar energy as an energy source.

Furthermore, Ma'aden signed a MOU with Glasspoint, to develop the world's largest solar process heat plant for generating steam for our aluminum business. This project, which is called Ma'aden Solar I, will be located in Ras al Khair and provide Ma'aden's bauxite refinery the 1,500-megawatt energy and will contribute to our ambition of being a global sustainable mining champion by reducing 600,000 tons of our annual carbon emission.

Our GHG emissions per scope in 2022 is as follows:

	UNIT	2020	2021	2022
Direct (Scope 1) CO ₂ emissions	tCO ₂ e	8,625,631	7,133,515	9,461,014
Energy indirect (Scope 2) CO ₂ emissions	tCO ₂ e	5,597,143	5,204,049	4,439,963
Scope 1 & 2 Emissions Intensity of Aluminum Production (Includes Scope 1 and 2 for MAC, MRC, MBAC)	tCO ₂ e/Ton	1.84	1.76	1.60
Scope 1 & 2 Emissions Intensity of Phosphate Production (Includes Scope 1 and 2 for MPC)	tCO ₂ e/Ton	0.84	0.62	0.78
Scope 1 & 2 Emissions Intensity of Base Metals and NEW Minerals Production (Includes Scope 1 and 2 for BMNM)	tCO ₂ e/Ton	36.14	39.72	44.51
Scope 1 & 2 Emissions intensity of Ma'aden (Total Scope 1 and 2 emissions for total production)	tCO ₂ e/Ton	1.19	1.03	1.03



Mansourah & Massarah Solar Panels



Glasspoint Ma'aden Solar 1

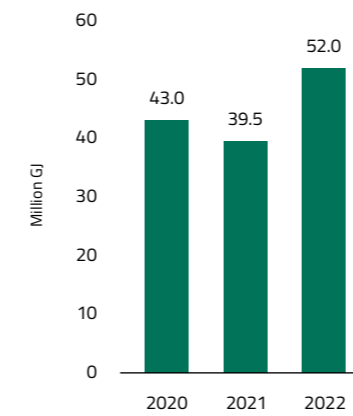


MOU signing ceremony between Ma'aden and GlassPoint for Solar Steam project (CSP)

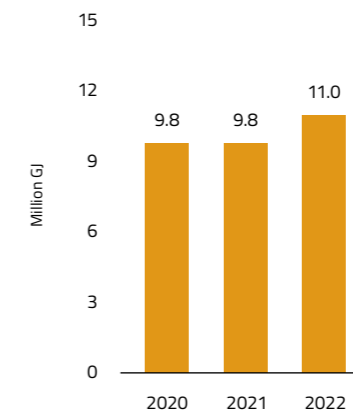
In terms of on-site fuel consumption, Ma'aden experienced a significant rise in diesel usage in 2022 because of the contractors' operations in Jalamid and Ras Al-Khair mines.

However, we have successfully closed out the crude oil usage in our operations starting from the year 2021. Also, we have constantly reduced all other types of energy usage. As a result, our overall energy usage has decreased by 6.4% compared to 2020.

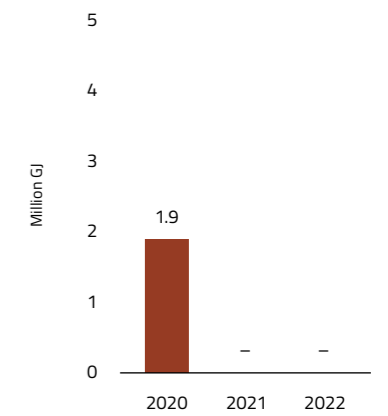
NATURAL GAS



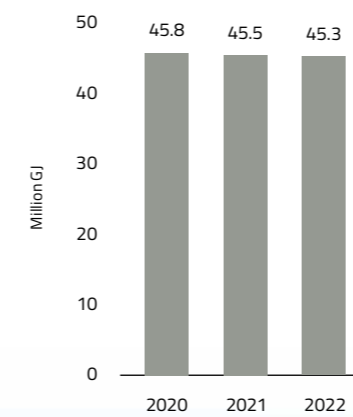
DIESEL AND HEATING FUELS



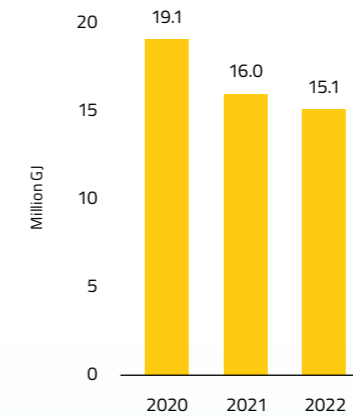
CRUDE OIL



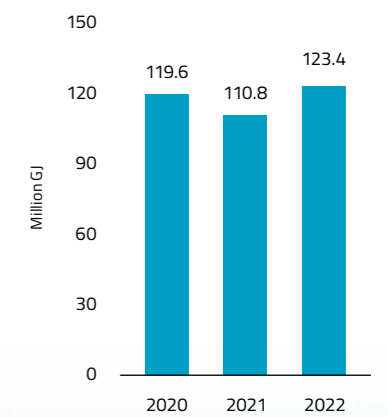
ELECTRICITY USE



SELF-GENERATED (WASTE HEAT)



TOTAL ENERGY CONSUMPTION





MOU Signing with National Center for Vegetation Development and Combatting Desertification (May 30, 2022)

Special Focus – Decarbonizing our world, beyond our operations

Afforestation Project for Carbon Offsetting

As a continuous endeavor to effectively respond to climate change, which has a significant impact on Saudi Arabia's natural and business environment, Ma'aden has been actively conducting afforestation projects.

In 2022, Ma'aden signed a Memorandum of Understanding (MoU) with the National Center for Vegetation Development and Combatting Desertification to strengthen joint cooperation, to plant trees, and develop the Kingdom's natural vegetation. Under the terms of the memorandum, Ma'aden will be planting 20 million trees by 2040 and irrigating them with renewable water sources.

Also in March 2022, the King Salman Bin Abdulaziz Royal Natural Reserve started planting 500,000 tree seedlings in the reserve's lands, which includes 400,000 seedlings in Jubba and 100,000 in Al-Tubayq. As a strong collaboration between Ma'aden and the reserve, we completed planting 100,000 trees in 2022.



Ma'aden will be planting
20 million
TREES BY 2040



As a strong collaboration between Ma'aden and the reserve, we completed planting
100,000
TREES IN 2022 TREES IN 2022 AT
KING SALMAN BIN ABDULAZIZ ROYAL RESERVE



Blue Ammonia certificate awarding ceremony at TÜV headquarters Germany



MENA Voluntary Carbon Market at the 6th edition of the Future Investment Initiative in Riyadh (October 27, 2022)



Producing more environmentally friendly 'Blue Ammonia'

The production of ammonia, one of the key materials of fertilizer manufacturing and widely-used industrial gas, consumes hydrogens which are very often gathered from fossil-fuels-based methodologies. Therefore, technologies to reduce or even avoid carbon emissions in ammonia production are globally researched.

In its effort to reduce the carbon footprint of ammonia production, in 2022, Ma'aden contracted with Gulf Cryo to build and operate a CO₂ plant in its phosphate complex in Ras Al Khair. The plant will capture 300,000 metric tons of CO₂ per year for the coming 20 years, from three ammonia plants of Ma'aden.

The captured CO₂ will be used for industrial gas applications, replacing the use of fossil fuels, thereby creating a circular carbon economy in Saudi Arabia.

In November 2022, Ma'aden was certified to export 138,000 tons of Blue Ammonia, the gas that is manufactured by low-carbon methodology. The certifications were granted by TÜV Rheinland, and it is the largest amount certified up to the date of certification.

Participation in the voluntary carbon market (VCM)

In October 2022, the first MENA Voluntary Carbon Market was held at the 6th edition of the Future Investment Initiative in Riyadh. The auction offered high-quality CORSIA-compliant and Verra-registered carbon credits. Among the 15 Saudi and regional entities participating in the sale, Ma'aden was one of the largest purchasers of carbon credits.

Ma'aden has been committed to being an ESG leader in the Kingdom as the mining industry grows prominence and becomes a key player in powering the energy transition. This purchase of carbon credit is also aligned with our continuous efforts to ensure meaningful emission reductions and to support Saudi Arabia's commitment to net zero ambitions.

In November 2022, Ma'aden was certified to export

138,000
TONS OF BLUE AMMONIA



Among the 15 Saudi and regional entities participating in the sale, Ma'aden was
one of the largest
PURCHASERS OF CARBON CREDITS.



NON-GHG EMISSIONS

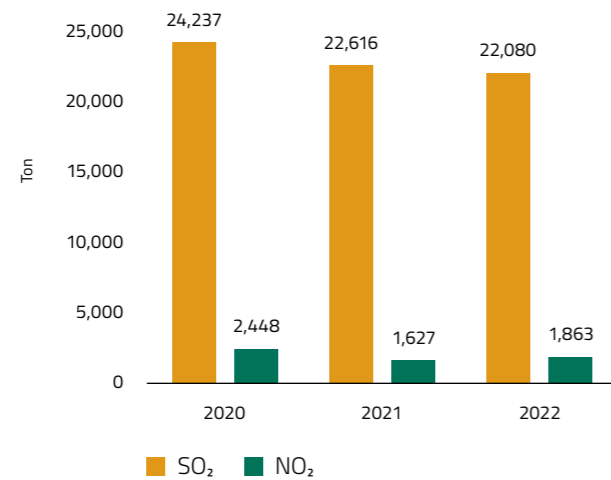
Many factors contribute to air quality at and around our operating sites. We monitor air quality for particulate matter such as PM 10 & PM 2.5 in addition to nitrous oxide, sulfur oxide, and other gases and continually look for ways to reduce emissions.

Wherever we operate, we meet or exceed relevant regulatory limits and international standards for mining industry emissions and air quality, such as those promulgated by the International Council on Mining and Metals and the United Nations 2030 Agenda for Sustainable Development.

2022 Performance

We focus on controlling and monitoring air emissions under our control at their source and minimizing our impact on the air quality in all our operating locations.

NON-GHG AIR EMISSIONS



BIODIVERSITY

Since mining and processing operations can be disruptive to local ecosystems if not responsibly managed, Ma'aden actively works to mitigate or compensate for ecological damage wherever necessary. We are dedicated to maintaining or improving the quality of land, water, and natural ecosystems everywhere we do business.

Ma'aden is addressing its biodiversity and ecological rehabilitation issues through the development of sound risk and impact policies and practices that help preserve the ecosystems we depend on, from site prospecting all the way through to site closure.

Biodiversity Management

Ma'aden is committed to minimize negative impact or our business to biodiversity, and therefore striving to refrain from operating in protected areas without essential protective measures. In the Ma'aden Safety, Security, Health and Environment Management (MSHEM) system, we have developed biodiversity management standards that mitigate the impact of our operations on biodiversity.

Our biodiversity management standard applies to our affiliates to anticipate and mitigate impacts on biodiversity at all stages in the mining value chain from exploration, project development, operations (including transport routes and associated infrastructure), and closure.

Complying to this standard, all our affiliates are required to establish, maintain, and implement a process to:

- 1) Identify and assess the biodiversity features within the area of influence and establish a baseline of key biodiversity values;
- 2) Conduct risk assessments on the likelihood and consequences of potential direct, indirect, cumulative and perceived impacts; and
- 3) Regularly re-assess and review potential biodiversity impacts.



When designing the biodiversity management processes mentioned above, should consider the physical and biological environment; the next land use aspiration at closure; and social and economic factors.

2022 Performance

	UNIT	2021	2022
Size of operational site in, or adjacent to, protected areas and areas of high biodiversity value	Km ²	4.79	9.79
Operational sites close to protected areas of high biodiversity	#	1	2
IUCN Red List species and national conservation list species with habitats in areas affected by operations	#	1	1
Significant impacts on biodiversity	Qual.	None	None

TAILINGS AND MATERIALS

Ma'aden strives to reduce waste and environmental impact associated with our natural resource sourcing, operations, and material usage across our value chain. Successful management and minimization of waste from Ma'aden's operations are critical to hazardous materials management, tailings management, and materials reuse and recycling programs.

Waste Management

Waste management starts with minimizing the inception of materials in our production, and ends with minimizing the final disposal. This implies that the successful management and minimization of waste should be an indicator of how efficient our operations are, from which insights are of critical importance to Ma'aden.

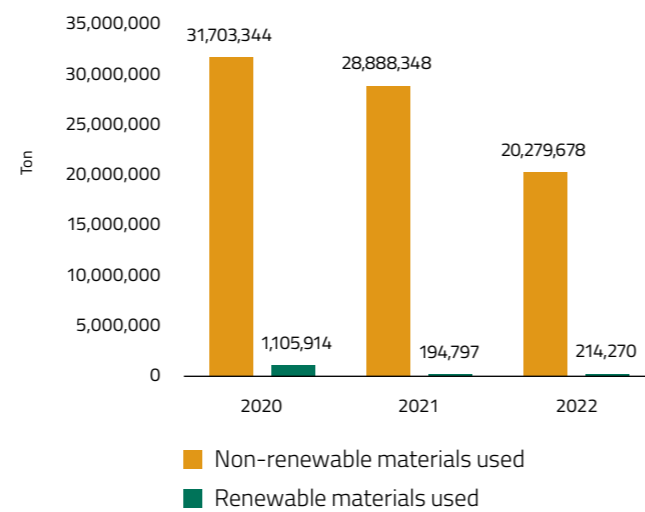
Therefore, we implement policies to reduce waste at our facilities, aiming to minimize waste intensity while managing the waste we produce responsibly in the interim. Such policies include robust procedures to manage dross and salt cake residues, including for their safe reuse, storage, or disposal.

Also, Ma'aden actively engages employees at all its sites to be trained in implementing leading practices in waste identification and classification, protocols for on-site storage, off-site disposal, and keeping accurate and compliant reporting and record keeping.

2022 Performance

Ma'aden increased overall production volume in 2022. However, due to our successful implementation of enhancement of material usage efficiency, Ma'aden's material inception has been reduced by 30% during the same period. Starting form next year, material usage efficiency will be incorporated within the Ma'aden's sustainability footprint management.

TOTAL MATERIALS USED FOR PRODUCTION



Our waste generation trend also supports our interpretation on the increased material usage efficiencies in our business operations. In 2022, the volume of wastes recovered has been increased by 4%.

	UNIT	2020	2021	2022
Solid Hazardous Waste Generated	Ton	2,188,845	2,255,949	2,848,773
Solid Non-Hazardous Waste Generated	Ton	17,083	48,394	63,724
Liquid Hazardous Waste Generated	M ³	14,872	11,834	14,628
Liquid Non-Hazardous Waste Generated	M ³	45,415	65,859	67,423
Solid Hazardous Waste Recovered	Ton	7,290	8,196	5,460
Solid Non-Hazardous Waste Recovered	Ton	9,668	8,950	10,377
Liquid Hazardous Waste Recovered	M ³	3,323	4,161	6,375
Liquid Non-Hazardous Waste Recovered	M ³	-	-	-

MATERIAL USAGE HAS BEEN REDUCED BY
▼ 30%
 during the same period

IN 2022, THE VOLUME OF WASTES RECOVERED HAS BEEN INCREASED BY
▲ 4%





WATER STEWARDSHIP

Water Stewardship relates to water consumption, usage efficiency, quality and wastewater discharge in the communities in which Ma'aden operates to ensure that community water systems are not adversely affected by our operations.

Water Management

In Saudi Arabia's desert climate, with saltwater surrounding on three sides and limited bodies of fresh water, groundwater is an invaluable resource. Each affiliate is empowered and encouraged to contribute to Ma'aden's Water Stewardship goal in the way that is most effective for their operations.

In partnership with National Water Company (NWC), Ma'aden has been developing infrastructure to supply our industrial complexes in Wa'ad Al-Shamal with treated sanitary effluent from treatment facilities through over 300 Km water pipeline.

Besides our effort to minimize the risk of water scarcity, Ma'aden adheres to the highest viable water quality standards to ensure that the water systems of our neighboring communities are not affected by effluents we discharge through our business activities.

2022 Performance

In 2021, we expanded upon the partnership with NWC by signing a water usage MOU for one of our phosphate mining affiliates in Wa'ad Al Shamal industrial complex – MWSPC – to provide its phosphate operations with treated wastewater.

This project is planned to be completed in 2023 and will provide most of the water required for existing facilities and the planned new Phosphate 3 facility. This is projected to reduce Ma'aden's phosphate related aquifer groundwater by 50% once completed in 2023 or 2024.

	UNIT	2020	2021	2022
Water withdrawal by source	M ³	55,811,952	58,791,422	62,032,002
Municipal water supply or water utility	M ³	5,426,916	6,244,850	8,124,926
Wetlands, rivers, lakes, and oceans	M ³	16,063,985	15,992,666	15,265,433
Groundwater	M ³	32,846,407	35,137,898	36,098,160
Wastewater from other organizations	M ³	1,474,644	1,416,008	2,543,483
Volume of water recycled and reused	M ³	4,950,028	5,138,333	1,601,205
Total water usage	M ³	60,761,980	63,929,755	63,633,206



MA'ADEN ADHERES TO THE HIGHEST VIABLE WATER QUALITY STANDARD to ensure that the water systems of our neighboring communities are not affected by effluents we discharge through our business activities.

5%
MORE WATER WAS DISCHARGED IN 2022

Ma'aden did not withdraw and use any water from water sources that will be significantly affected by our withdrawal. Also, we have not been involved in any events regarding negatively impacting on destinations that we discharged water after our usage. In 2022, we discharged 5% more water than we did last year.

	UNIT	2021	2022
Discharge to surface water	M ³	–	–
Discharge to groundwater	M ³	–	–
Discharge to seawater	M ³	895,662,808	943,770,112
Discharge to third-party	M ³	–	2,586
Total water discharge	M ³	895,662,808	943,772,698

ENVIRONMENTAL COMPLIANCE

Environmental Regulatory Compliance

Ma'aden has completed assessment on the new environmental standards issued from the Ministry of Environment, Water and Agriculture in 2022 and submitted the compliance plan to the authority i.e. the National Center for Environmental Compliance. The environmental monitoring and management plan has been updated to incorporate all the new applicable regulatory requirements.

Environmental Permit

100% of Ma'aden business units and their regulated operational sites operate with valid Environmental Permits to Operate. In addition, as a standard practice, all the new projects are deeply assessed for their impacts to surrounding environment and go through environmental regulatory permitting process involving independent experts with scrutiny of the project. Ma'aden also have an independent

review mechanism for all stages of the project where internal subject matter experts and external consultants review the quality of prerequisites of the project stage and only based on independent expert advice, the project could move to next stage.

100% of the Ma'aden business units and their regulated sites have comprehensive EIA studies conducted at the early conception stage of the project and these studies will further expand as the project progresses to the next stages. The environmental impact assessments identify the impacts and recommend mitigation to overcome these impacts in the environmental monitoring and management plan. All the licensed mines and construction sites obtain Environmental Permit to Construct before commencing any construction activity.



 **100%**

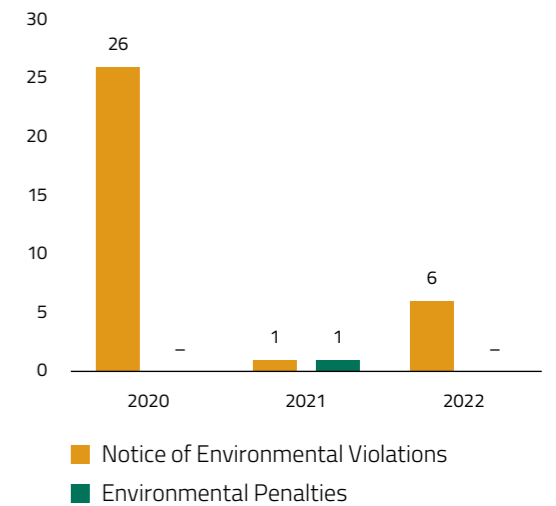
OF THE MA'ADEN BUSINESS UNITS AND THEIR REGULATED SITES have comprehensive EIA studies conducted at the early conception stage of the project and these studies will further expand as the project progresses to the next stages.



Environmental Monitoring Program

A comprehensive environmental monitoring program is established at all operational sites. This includes but is not limited to quarterly monitoring of air quality including point sources, water quality including groundwater and other water outfalls, soil quality, noise levels at sensitive receptors and waste manifestation. These periodical environmental monitoring reports are regularly submitted to the relevant regulatory authorities.

ENVIRONMENTAL PERFORMANCE



CHANGING... LIVES

TAKING CARE OF SOCIETY

Ma'aden aspires to create a "zero harm" work environment and to strengthen the safety culture of our employees, contractors, customers and host communities.

RELEVANT GRI STANDARDS

- GRI 401: Employment 2016
- GRI 403: Occupational Health and Safety 2018
- GRI 404: Training and Education 2016
- GRI 405: Diversity and Equal Opportunity 2016
- GRI 413: Local Communities

Community is the foundation of Ma'aden's business and it is our responsibility to protect the health, safety, and security of people who belong to our community.



HEALTH, SAFETY, AND SECURITY

At Ma'aden, Health, Safety, and Security (HSS) is being embedded as a way of living rather than a business imperative. Stakeholders are engaged through a positive safety culture, ensuring that an ideal workplace environment is created in which all employees, contractors, business partners, associated families, and communities can thrive. Together, we strive toward excellence in Health, Safety, and Security while making significant contributions to the growth of Ma'aden.

HSS, Crisis, and Emergency Management

Ma'aden recognizes that mining and mineral processing can be an inherently dangerous industry. Therefore, we are dedicated to fostering a workplace culture where safety is a precondition for work, through the promotion of a positive safety culture among all our employees, contractors, customers, and host communities.

Ma'aden aspires to create a "zero harm" work environment and to strengthen the safety culture of our employees, contractors, customers and host communities. Effective health, process safety, and safety risk management can prevent high consequence incidents, work-related death, injury and ill health. Also, when organizations manage risks correctly, it can boost productivity, enhance asset reliability, support the economy, and contribute to a just society.

Safety Governance

Ma'aden's Board has established a Safety and Sustainability Committee that functions alongside the other Board sub-committees as part of Ma'aden's corporate governance program.

This level of governance provides an increased level of oversight and supervision of safety and risk at all levels of the organization. At a Board level, there is stringent oversight of the company's safety strategy and whether it is delivering the desired performance outcomes.

The Executive Safety Council assesses safety and risk on a more tactical level, ensuring that the systems and processes that make up the strategy are being implemented within the business.

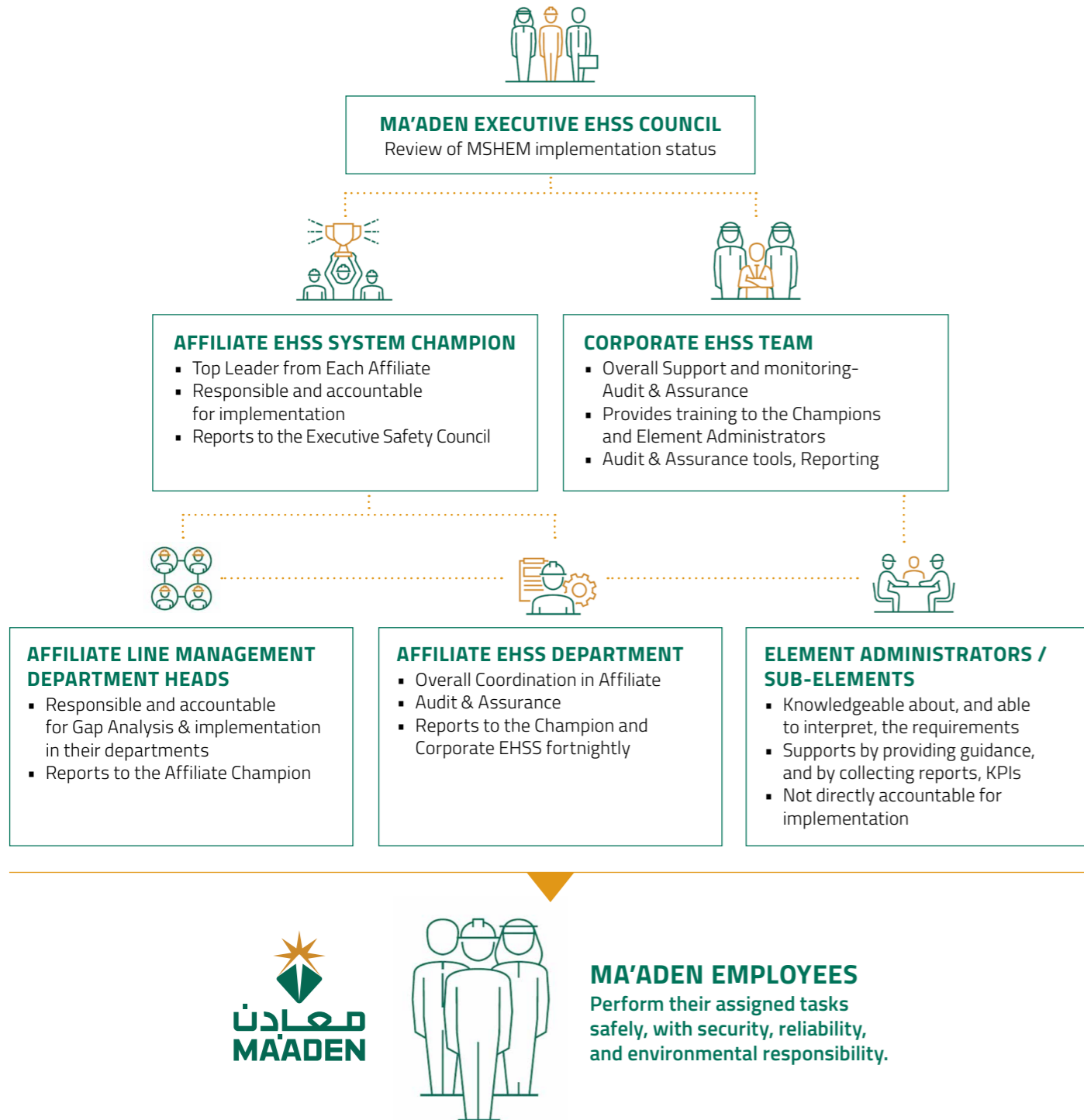
MA'ADEN HAS LOWERED ALL THE HEALTH AND SAFETY RELATED KPIs IN 2022

AIFR + LTIR DECREASED FROM LAST YEAR'S RATE

The corporate and affiliate safety teams are working together to design and implement the processes and systems that will deliver performance improvements under the risk-based approach to safety. MSHEM (Ma'aden SHE Management) is our robust health, safety, security, and environmental management system. Through MSHEM, Ma'aden is building awareness, developing capability, and ensuring implementation of safe, healthy, and environmentally friendly business practice of our employees and contractors.

Our governance structure for safety introduced above are illustrated in our MSHEM System Framework, which is as follows:

MSHEM GOVERNANCE STRUCTURE



Health and Safety Performances

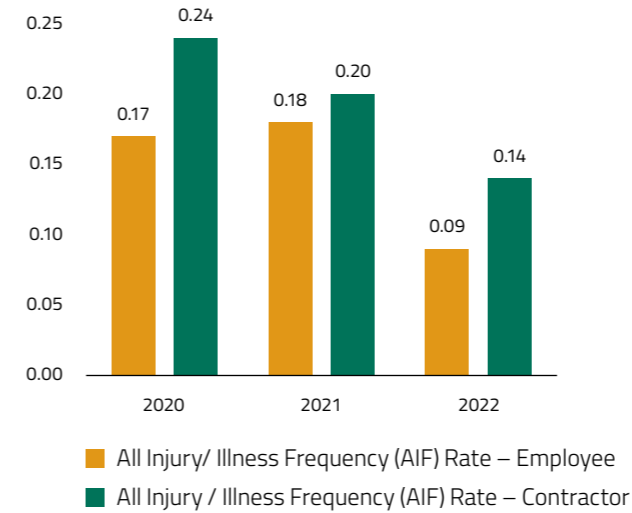
In striving to improve overall employee wellbeing, the physical and mental health of employees and contractors are the foundations of Ma'aden.

As a result of our continuous efforts to ensure a safe and harmless working environment to our employees and contractors, Ma'aden has lowered all the health and safety related KPIs in 2022.

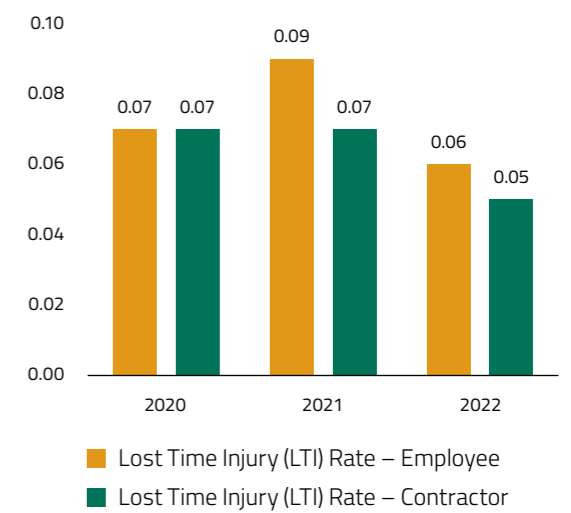
Firstly, our year-over-year health and safety performance indicators, AIFR (All Injury /Illness Frequency Rate) for both employee and contractor, decreased from last year's rate.

Also, the Lost Time Injury Rate (LTIR) for both employees and contractors has decreased.

HEALTH AND SAFETY 2022 PERFORMANCE – ALL INJURY / ILLNESS FREQUENCY (AIF) RATE

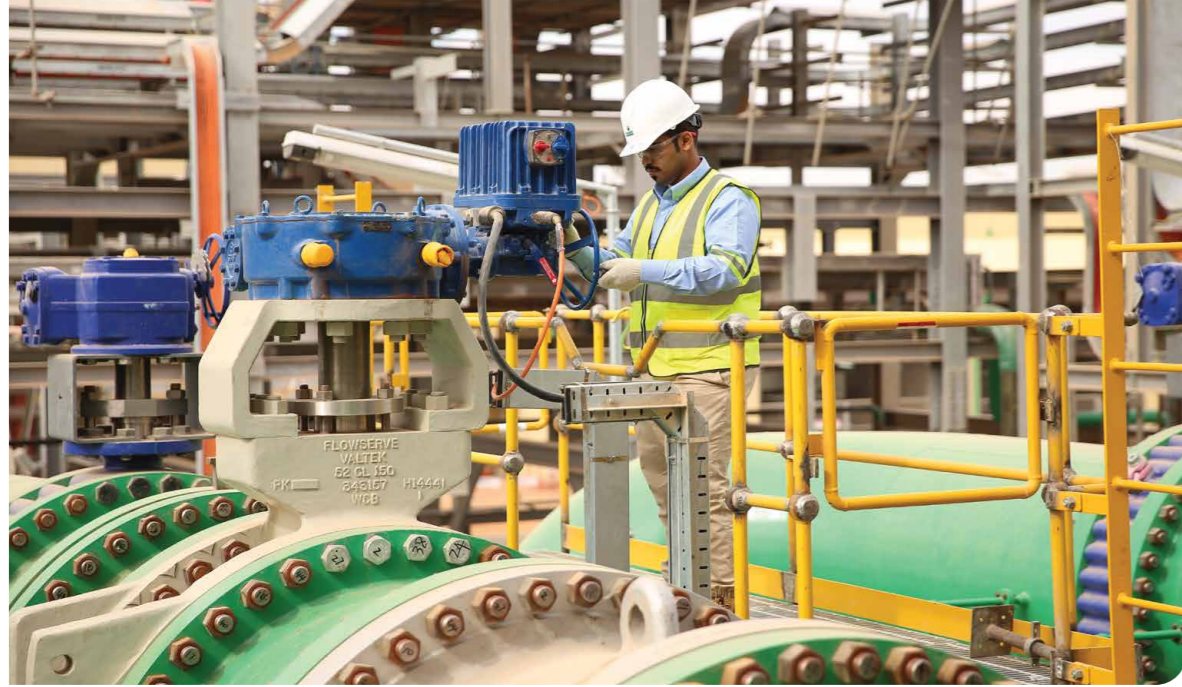


HEALTH AND SAFETY 2022 PERFORMANCE – LOST TIME INJURY (LTI) RATE



In striving to improve overall employee wellbeing, the physical and mental health of employees and contractors are the foundations of Ma'aden.





Below are the actual safety and health events that occurred during the reporting period, which are the basis of our performance indicators disclosed above.

	UNIT	2021	2022
Fatalities (FAT) – Employees	Number of employees	–	–
Fatalities (FAT) – Contractors	Number of employees	1	–
Lost Time Injury (LTI) – Employees	Number of employees	6	4
Lost Time Injury (LTI) – Contractors	Number of employees	12	10
Restricted Duty Injury (RDI) – Employees	Number of employees	2	–
Restricted Duty Injury (RDI) – Contractors	Number of employees	6	4
Medical Treatment Injury (MTI) – Employees	Number of employees	4	2
Medical Treatment Injury (MTI) – Contractors	Number of employees	18	13
TOTAL HSE Incidents (Reportable) – Employees	Number of employees	12	6
TOTAL HSE Incidents (Reportable) – Contractors	Number of employees	37	27
TOTAL Hours Worked – Employees – Employees	Hours	13,085,459	13,387,961
TOTAL Hours Worked – Employees – Contractors	Hours	36,682,555	38,897,319

Crisis & Emergency Management

Ma'aden aims to enact the goals and requirements needed to deal with all emergencies and crises. We review our crisis management system periodically to measure efficiency and keep abreast of changes related to preparedness for all emergencies. By doing so, we plan to improve our system in line with the highest international standards and the best experiences in the industrial sectors.

Ma'aden's crisis management priorities are 1) preserving lives, 2) preserving the environment, and 3) preserving the company's property, reputation, and production. We achieve those priorities by conducting several exercises quarterly and annually.

Below are the representative achievements of Ma'aden during the reporting period, in terms of crisis and emergency management.

Post-pandemic improvement for Fire & Rescue mechanisms

After the pandemic, we developed and improved internal training mechanisms/facilities for all fire and rescue personnel. Also, we support improvement in our staffs' performance and preparedness for all emergencies.

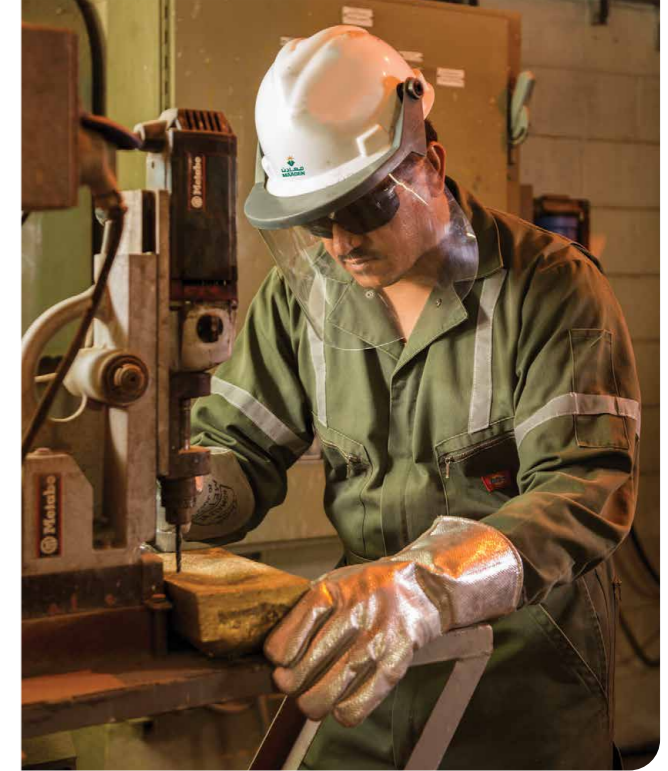
Fire and Rescue team for companies in Northern Boarder region, KSA

Ma'aden established and led a group of fire and rescue teams from multiple government agencies and sectors, to enhance crisis and emergency responses to companies in the Northern Boarder region of KSA.

Emergency Preparedness & Crisis Management Trainings and Maintenance

During 2022, more than 2,000 employees were trained and induced on emergencies and crises. 116 drills have also been made to test awareness and emergency response speed. According to periodic maintenance plans to test the quality and efficiency of emergency equipment, more than 17,000 tests have been carried out.

Besides the above, Ma'aden is improving our crisis and emergency management capability by conducting multiple workshops to increase staffs' efficiency in dealing with emergencies and crises, in collaboration with regulatory authorities.



DURING 2022,
2,000+
employees were trained and induced on emergencies and crises.



Ma'aden aims to enact the goals and requirements needed to deal with all emergencies and crises.



Cybersecurity

Technology is constantly and rapidly evolving, and at the same time, cyber threats are increasing and advancing. Due to its digitization, interconnection, and automation, the mining industry is vulnerable to cyber threats and attacks.

Because a cyber breach could compromise our digital infrastructure, industrial control systems, and our fundamental ability to conduct business, Ma'aden also regards cybersecurity as a key priority.

In 2022, Ma'aden enhanced its business efficiency through enhancing cybersecurity.

Cybersecurity certification and compliance

In 2022, Ma'aden renewed the ISO 27001:2013 cybersecurity certification for the third year in a row. Also, we raised the compliance level to 97% within the mandates of the National Cyber Security Authority.

Cybersecurity Compliance Assessment

We launched our first Cybersecurity Compliance Assessment, to ensure compliance with our cybersecurity policy across all Ma'aden affiliates.

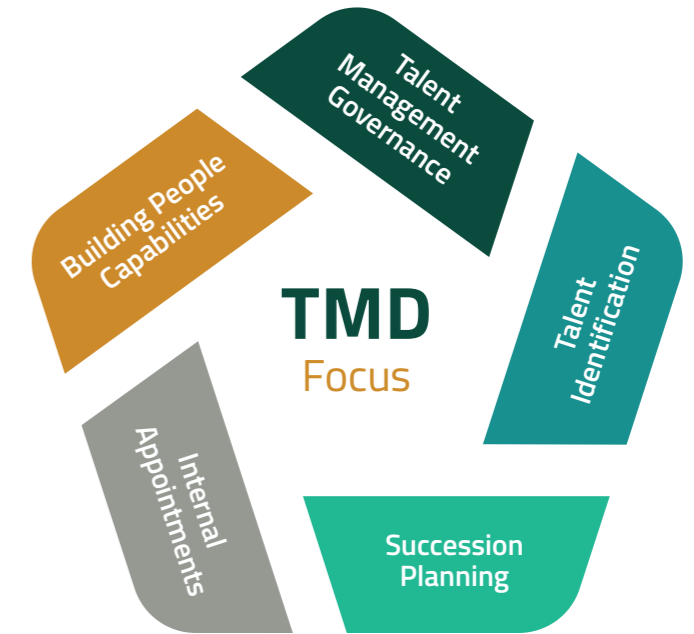
Along with that, Ma'aden continued to operate the cybersecurity awareness building and training programs for our employees. This will ensure the high level of cybersecurity awareness among our organizations.

Cyber security initiatives and programs

In 2022, Ma'aden implemented the following broad range of initiatives and projects which lead us to successfully lower our enterprise risk regarding cyber security from 25 to 15:

- Implement OT Security Monitoring Capability
- Enhance Encryption & Key Management controls
- Enhance & Sustain Cyber awareness and culture
- Supply chain & third-party security management
- Improve threat intelligence and visibility monitoring
- Application control on the Ma'aden environment

Besides our efforts above, Ma'aden keeps enhancing its technology infrastructure by ensuring accurate monitoring of performance from different aspects. Furthermore, we invested in a range of artificial intelligence technologies to improve our business resiliency, upgraded Information Technology infrastructure, and continued enhancing the awareness and capabilities of our people through training programs. Finally, in line with the national mandates and directions, Ma'aden is striving to achieve 100% Saudization in Cybersecurity.



Ma'aden aspires to provide its employees with a nurturing workplace that improves their health and wellbeing.

EMPLOYEE WELLNESS

Ma'aden aspires to provide its employees with a nurturing workplace that improves their health and wellbeing. We believe in doing so because we know that recruitment and retention are important to securing an effective workforce and making operations efficient.

Additionally, to retain our talented employees and minimize turnover, a formal avenue for employees to express their concerns or ideas for improvement is imperative.

We understand that equal opportunity and diversity are critical not only to our employee retention, satisfaction, and performance but also to Ma'aden's ability to contribute to national and international development goals. Therefore, we are never tolerant to discrimination against anyone due to race, gender, religion, age, or physical disability.

Diversity and Inclusion

As put forth in our Code of Conduct, Ma'aden's policies on diversity, equality, and non-discrimination are designed to make individuals feel welcome and respected regardless of race, nationality, religion, gender, disability, ancestry, social origin, political, or other opinions. Ma'aden recognizes the opportunity to improve business performance by drawing on the talent, and distinct experiences, viewpoints, and ideas of a diverse and inclusive workforce. We are therefore focused on equal opportunity in hiring, developing, training, and retaining the best people.

In addition, Ma'aden is creating employment and educational opportunities for Saudi citizens in remote areas. The development of our mines not only boosts the local economy, but also opens up a range of jobs and professional development opportunities for Saudi citizens and local communities.

Employment Data

In 2022, Ma'aden hired a total of 7,260 Full-Time Employees, almost 23% more than the previous year. In addition, we hired 1,094 contractors globally during the reporting period. Ma'aden did not employ any employees on temporary contracts.

	2020	2021	2022
No. of FTEs (Full Time Employees) – Men	5,769	5,777	7,073
No. of FTEs (Full Time Employees) – Women	68	131	187
Local Nationals – Men	4,036	4,223	4,723
Local Nationals – Women	68	131	186
Managers & Directors – Men	249	289	331
Managers & Directors – Women	1	2	7
Global Contractors – Men	1,366	1,153	1,076
Global Contractors – Women	–	–	18
Age Group <25	–	4%	2%
Age Group 25-40	–	61%	66%
Age Group 40-60	–	34%	32%
Age Group >60	–	1%	0%



JOIN US

In 2022, we built upon our strong Female Employment plan to improve the recruitment, training, and development of local female employees. Today, Ma'aden has 187 women working as full time employees.

Additionally, we have been able to recruit and train five new female managers and directors to bring the total number of female managers and directors to seven. Lastly, as Ma'aden relies on a strong contractor base, 18 global contractors engaged this year were female, up from zero last year.

Employee Training and Development

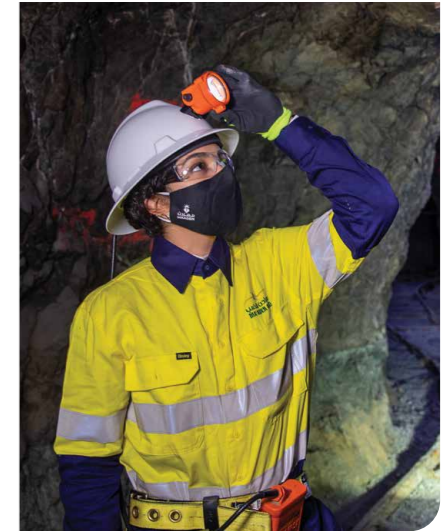
We empower our people through opportunities for continual personal and professional growth and the tools and resources needed to strengthen their skills and enhance their capabilities. As we continue these efforts, we are focused on recognizing and training the leadership and talent needed for Ma'aden's future success.

We are taking practical steps to set our people up to succeed as the future leaders of the Kingdom and the global mining industry. Training and professional development programs are an integral part of Ma'aden's strategy to create a pool of highly talented, skilled, and qualified candidates to support our continued growth.

Continuing education and skills training are critical to operating safely and profitably, providing us with a better workforce and our employees with opportunities for growth and promotion.

Ma'aden's employee training not only covers work-related skill and knowledge trainings, but also awareness and expertise building for our material environmental, social, and governance topics.

	2021	2022
Training Hours – Men	136,959	149,609
Training Hours – Women	3,438	9,868
Training Hours – Local	124,757	135,885
Training Hours – Expat	15,640	23,592
# of Employees Trained – Men	2,060	2,652
# of Employees Trained – Women	57	113
# of Employees Trained – Local	1,807	2,249
# of Employees Trained – Expat	310	516
Avg. Training Hours per Employee – Men	66.48	56.41
Avg. Training Hours per Employee – Women	60.32	87.33
Avg. Training Hours per Employee – Local	69.04	60.42
Avg. Training Hours per Employee – Expat	50.45	45.72





COMMUNITY & HUMAN RIGHTS

Human rights are rights inherent to all human beings, regardless of race, sex, nationality, ethnicity, language, religion or any other status. Ma'aden aspires to be a welcomed neighbor, respecting human rights and having a meaningful relationship with our hosting communities.

Community Engagements

Ma'aden's success undeniably depends on the success of the local communities in which it operates, and community relationships are of the utmost importance to its social license to operate.

Furthermore, new mining industry regulations include Social Performance legal requirements in the Kingdom. Effective social performance is core to Ma'aden's 2025 strategy and all of Ma'aden's operations are integrated with community engagement, development and social performance programs. This setup the company to be a catalyst for growth in the Kingdom and support the needs of our host communities, in line with the ambitions set out in Vision 2030.

Community Management System

Ma'aden has in place a management system for social performance, called the Community Management System (CMS). The CMS has three pillars, which are Community Engagement, Local Content, and Social Investment.

The CMS is:

- Based on best practice management systems
- Focused on key community risks & opportunities
- Based on a maturity model approach
- Tailored to Saudi and Ma'aden context
- Auditable and quantified scoring
- Comparable across sites over time
- Easy to use with ready-made templates



Affiliates Social Performance Assurance

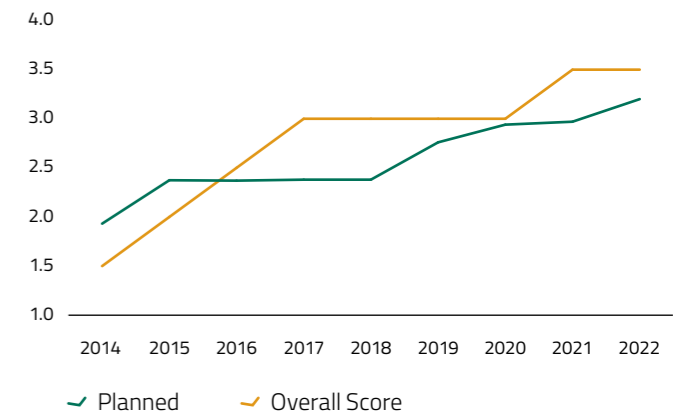
Annually, Ma'aden holds an assurance process to evaluate how well our affiliates are implementing the CMS and making performances of better adhering to our standards. Through this procedure, all affiliates are assessed based on the following:

1. Integration of social performance/CSR into the business
2. Impact and risk management
3. Community engagement
4. Complaints management
5. Local content (short and long-term)
6. Social investment

Then, the assessment results are distilled into a 5-scale score. We believe this affiliate social performance assurance procedure drives continuous improvement among our businesses in contributing to the sustainable development of our neighboring communities, by providing our affiliates with clear recommendations of how they should improve their social performance.

Our 2022 average affiliates' social performance score target was 3.5, with the actual result being 3.2. However, we believe our affiliates' endeavors will create a positive social impact, given they have made a continual improvement since our first assessment in 2014. Annual trajectories of our average and per affiliate social performance score is show in the below graph:

OVERALL COMPANY PERFORMANCE



Affiliates Social Performance Assurance

Ma'aden and its affiliates will strive to keep improving social performance. To achieve this aspiration, we have distilled the following takeaways from this year's affiliate social performance assurance:

CRITERIA	REQUIREMENTS
Collaborate with Stakeholders	<ul style="list-style-type: none"> Set up site-level structures to ensure engagement with stakeholders Engage Community members to decision-making and disclose information Use multiple forms of engagement for collaboration Engage internally with CSR team for mine procurement and recruitment plans
Long-Term Local Content Planning	<ul style="list-style-type: none"> Implement all site-level local content planning tools and systems Connect local content systems to the data gathered for planning and decision-making Ensure that the site is building capacity locally, by providing training for people and vendors Invest more in long-term skills development
Integrate Systems	<ul style="list-style-type: none"> Annually review the results of our assurances, surveys, and assessments to inform CSR planning Apply new standards for risk areas Ensure all sites implement systems Start strategic planning early in the annual cycle
Strengthen Resources	<ul style="list-style-type: none"> Review the handover process between CSR representatives, to enhance continuity Facilitate knowledge sharing between sites Provide adequate trainings to management and non-CSR-technical specialists Develop a CSR professional development program
Manage Risks	<ul style="list-style-type: none"> For higher-risk sites, improve systems, provide trainings, and develop the risk mitigation plan Regularly monitor, evaluate and report on impacts and risks Develop formal plans for collaborative monitoring and evaluation Provide corporate and affiliate-level support to higher-risk sites
Mature Engagement	<ul style="list-style-type: none"> Improve grievance management across all sites Implement ongoing awareness campaigns Develop document disclosure plans for what information needs to be shared with communities, how, why and when Develop systematic approaches to engaging vulnerable people



Success Stories

Central Region Collaboration

At Base Metals & New Minerals, the collaboration between Ad Duwayhi, Mansourah Massarah, and As Suq, has enabled the sites to share local talent across the sites to prevent local people from losing opportunities with Ma'aden.

Collaboration has also created synergies for engagement and collaboration with stakeholders.

Collaborating with NGOs to Address Pressing Needs

At IMC, one of the most prominent pressing needs of local communities is the lack of emergency services in the region.

To address this, the CSR team worked with an NGO to provide emergency services training for local volunteers, who can then respond to community stakeholders when there is an emergency.

Supporting local vendors at Al Amar

The site has worked with local vendors to develop a plan that builds local capacity.

With one vendor in particular, the site identified items required in the future and engaged a current local equipment vendor to help them to plan for providing items required in the future.

The site CSR representative has engaged procurement and used it to support local vendors and build capacity, there is an opportunity to scale up this sort of long-term local content planning.

SCHOOL OF EXCELLENCE



Special Focus – School of Excellence Program

The School of Excellence program is our flagship community engagement program, which was started in 2016 through a partnership between MWSPC and the Ministry of Education.

The program aims to provide high-quality education to students in the Northern Borders Region (NBR), Saudi Arabia's least populated region – where educational and professional opportunities are the most limited.

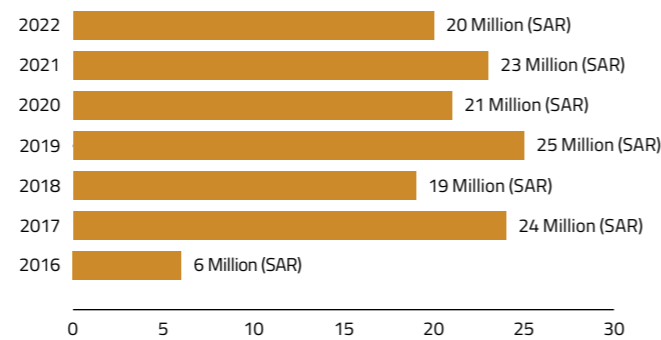
The program consists of two high schools, one in Ar'ar (the Region's capital) and another in Turaif, operated by the Dhahran Techno Valley Company.

The Ministry of Education provides the school buildings, curricula, policies, standards for achievement, and school leaders, and MWSPC overlooks the quality of operations and outcomes. Ma'aden funds all additional expenses incurred, including students' tuition fees and upgrades to school facilities including gyms, swimming pools, and STEM (Science, Technology, Engineering, and Mathematics) labs.

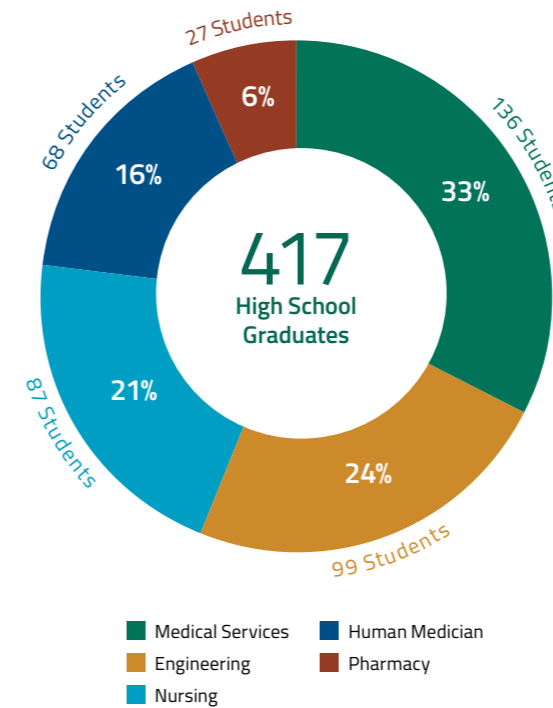
Our investment and returning impact

Since the preparation of our School of Excellence program, Ma'aden has spent a total of 158 million SAR to this program.

SCHOOL OF EXCELLENCE ANNUAL SPEND 2016-2022



DISTRIBUTION OF CAREER FIELDS CHOSEN BY GRADUATING STUDENTS



Based on our continuous investment, we accumulated that, up to date, we have supported over 1,000 students. Among the 636 students who graduated in the latest three years, 417 students have enrolled in STEM-related majors in universities.

Support for Human & Indigenous Rights

Ma'aden fully endorses the International Council on Mining and Metals (ICMM) position that "companies have an absolute responsibility to respect the human rights of the communities they affect and the people they employ." As a result, we are developing appropriate policy and governance processes designed further to bolster economic and social rights through poverty alleviation, the provision of essential infrastructure, and broad social investments.

Furthermore, Ma'aden supports all human rights recognized by Islamic Sharia, United Nations human rights conventions, and the conventions of the International Labor Organization (ILO), to the extent adopted by Saudi Arabia. Also, we fully comply with the laws of Saudi Arabia, as promulgated by the Kingdom of Saudi Arabia Human Rights Commission. These include, but are not limited to, The Arab Charter on Human Rights, the Cairo Declaration on Human Rights in Islam, and The International Convention on the Elimination of All Forms of Racial Discrimination.

Not only the rights of our people, Ma'aden will also respect indigenous peoples' rights, interests, aspirations, culture, and natural resource-based livelihoods wherever we do business, including taking any necessary steps to protect and preserve critical historical and cultural heritage artifacts and sites.

Among the 636 students who graduated in the latest three years,

417 STUDENTS

have enrolled in STEM-related majors in universities.

Ma'aden fully endorses the International Council on Mining and Metals (ICMM) position that "companies have an absolute responsibility to respect the human rights of the communities they affect and the people they employ."

CHANGING... INITIATIVES

ECONOMIC CONTRIBUTIONS

Ma'aden aspires to be a positive economic agent in the host countries and local communities we operate.

RELEVANT GRI STANDARDS

GRI 203: Indirect Economic Impacts 2016
GRI 204: Procurement Practices 2016

The ultimate social responsibility of business is to contribute to the development and prosperity of the local community it belongs to. Therefore, Ma'aden is constantly making efforts to develop local content and invest in the local community's development.



Ma'aden aspires to be a positive economic agent in the host countries and local communities we operate. We view Local Content and community investment as the value contributed to the local and national economy through expenditure on goods, services, and labor—which is particularly relevant to company goals of contributing to local economic development, Saudization, and positive community engagement. Promoting local development benefits stakeholders in all areas of operations, as these initiatives help grow Ma'aden's social license to operate, create value for host communities, and reduce project and reputational risks.

LOCAL CONTENT DEVELOPMENT

Local Content, which is a core component of KSA's Vision 2030, means the portion of total expenditure in the Kingdom of Saudi Arabia through the participation of Saudi components in the workforce, goods, services, production, and technical assets that remain in the KSA economy.

In 2022, Ma'aden spent 74% of our total supply chain spending on on-shore supply chain partners and 64% of our total goods purchasing spending on on-shore vendors.

	2020	2021	2022
On-shore supply chain spend (SAR Mn)	7,541	9,741	14,305
On-shore supply chain spend % of total	74%	72%	74%
Off-shore supply chain spend (SAR Mn)	2,586	3,842	5,025
Off-shore supply chain spend % of total	26%	28%	26%
On-shore goods spend (SAR Mn)	2,034	4,711	7,963
On-shore goods spend % of total	50%	56%	64%
Off-shore goods spend (SAR Mn)	2,059	3,695	4,425
Off-shore goods spend % of total	50%	44%	36%

▶ **74%**
of our total supply chain spending on on-shore supply chain partners

▶ **64%**
of our total goods purchasing spending on on-shore vendors



LOCAL CONTENT DEVELOPMENT

Ma'aden's Local Content Vision

Ma'aden's vision for Local Content is to maximize the mining industry's contribution to the Kingdom of Saudi Arabia through spending on Saudi components within labor, goods, services, assets, and technology. We are achieving this vision by focusing on five Local Content Strategic Objectives:



SAUDI EMPLOYMENT
Maximise employment opportunities for KSA nationals



LOCAL SMEs
Maximise opportunities for Local SMEs



LOCAL BUSINESS
Maximise participation of Local businesses in our supply chain



REMOTE REGION
Maximise economic opportunities for communities in remote regions



MINING INDUSTRY
Drive Local Content throughout the mining industry supply chain

THARWAH Local Content Program

Ma'aden has continuously strived to increase Local Content. In 2022, Ma'aden's CEO launched the THARWAH Local Content Program to support local entrepreneurs, suppliers, and businesses. This program represents Ma'aden's commitment to maximizing the mining industry's contribution to the Saudi Arabian economy through investments in labor, goods, services, assets, and technology. Ma'aden expects these efforts will drive Ma'aden's contribution to the achievement of the national Vision 2030.



Ma'aden management announcing local content program "Tharwah"

The five strategic objectives of our Tharwah program are as follows:

- **People:** Ma'aden is committed to creating new opportunities for employment for Saudi nationals – new jobs that are attractive, sustainable, and offer the opportunity for growth and development
- **Businesses:** Ma'aden will create new opportunities for companies based in KSA to grow and invest and create new businesses and industries

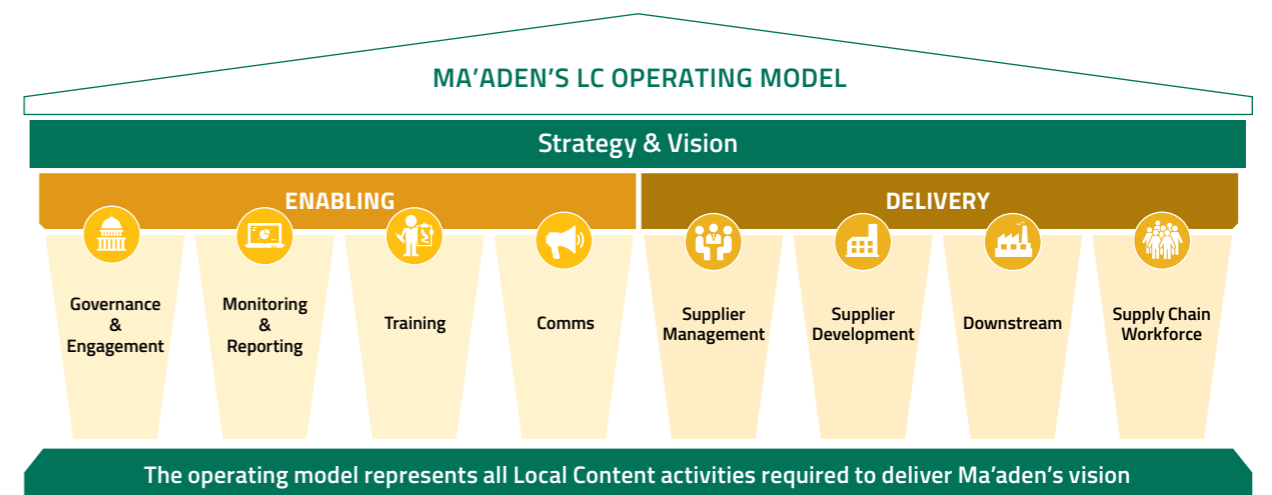
- **SMEs:** Ma'aden will support the creation and growth of Small and Medium sized Enterprises, as an engine of growth for the whole Saudi economy
- **Remote regions:** Ma'aden will work with the communities and the businesses in the remote regions where Ma'aden establish operations to grow the local economy and create opportunity and prosperity
- **Supply Chain:** Ma'aden will work with organizations across the mining industry to grow capability and capacity and increase Local Content



THARWAH

Local Content Operating Model

Ma'aden recognizes the unique opportunity to lead the development of Local Content within the mining sector. Ma'aden fully supports and commit to strategic and selective local sourcing of goods, services, and labor to develop local businesses to support the mining sector. Ma'aden's operating model for driving Local Content improvement is pictured below:



LOCAL CONTENT DEVELOPMENT

2022 Success Stories

Polyurethane Screens

Historically Ma'aden has imported steel screens, which are used in the gold mine crushing circuit, from a Chinese manufacturer. As part of our Local Content program, Ma'aden engaged with a local company, IK Saudi, to develop a polyurethane-based screen manufactured in KSA. The polyurethane screens cost more, but last longer.

- Typically requiring changing every 4 to 5 weeks, compared to the weekly replacement of steel screens
- This offers Ma'aden considerable cost savings and a reduction in working capital through holding lower inventories

Shredder Cutter

Shredder Cutters used in Ma'aden Rolling Company for can recycling units are sourced from an OEM manufacturer in the USA. We approached a local manufacturer Weir Arabia to manufacture them locally, and this trial was successful.

- The product can be supplied cheaper, offering Ma'aden cost savings
- Additionally, the local supply chain is shorter and more secure
- Also, a reduction in logistics offers environmental benefits

Calcined Petroleum Coke

CPC is one of the largest and most critical raw materials for aluminum smelting. Historically, CPC is entirely sourced from outside the Kingdom. Ma'aden has signed a five-year-supply agreement with a local investor for CPC for use in its aluminum smelter in Ras Al Khair.

- Ma'aden will receive an annual supply of 100,000 metric tons of CPC
- Production of CPC and supply to Ma'aden is scheduled to begin before the end of 2024

Aluminum Scrap

Ma'aden is working with several local suppliers to localize the aluminum scrap supply. Currently, are we qualifying multiple local suppliers and testing their materials in a trial order process.

- Ma'aden localized approximately 33% of total scrap supplies in 2022
- Our target is to achieve a 40% localization rate by 2025

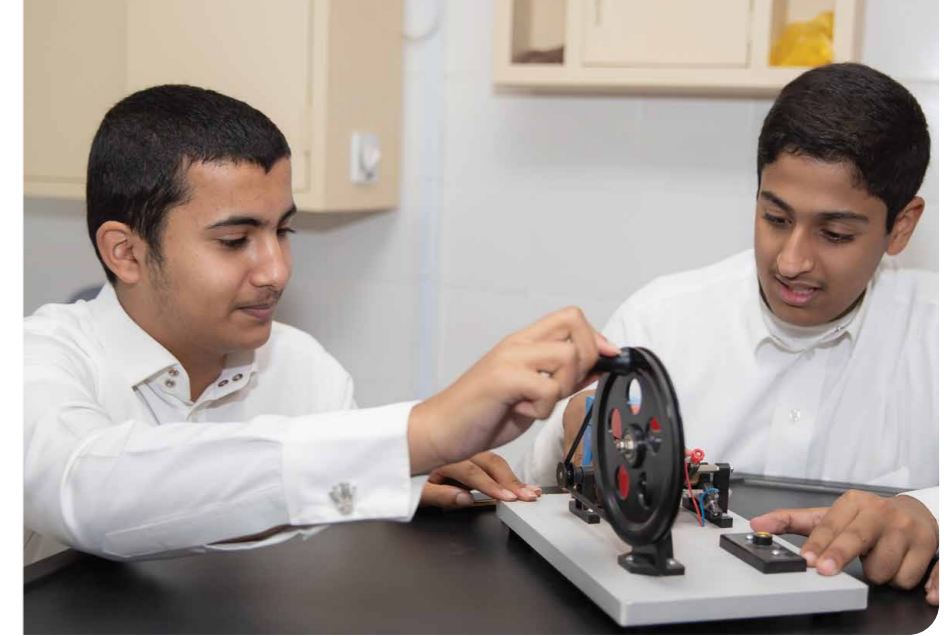
Liquid Nitrogen & Carbon Dioxide Production Plant

Ma'aden is working with a local investor to develop an on-site air separation unit to produce liquid nitrogen for our phosphate operations in Ras Al Khair.

Also, we are collaborating with one of our suppliers to build and operate a carbon dioxide production plant to recover raw CO₂ gas from our ammonia operations and provide food and beverage grade CO₂ in the KSA market.

These developments will:

- increase industrial gas capacity in KSA
- lower costs,
- reduce lead times, and
- decrease operational and safety risks



INVESTING IN LOCAL COMMUNITIES

To create shared value, we align our investments in the hosting communities to the local needs and business interests. Our investments in communities include skills development, for which we continue investing in education and training so that our young men and women are equipped for future jobs, particularly in the mining sector.

Also, we develop partnerships with governments and NGOs to leverage local expertise, build meaningful relationships, and foster social development in our host communities to enhance socioeconomic benefits and alleviate poverty.

Lastly, we invest directly and indirectly in communities to promote the resilience of local economies beyond the operational lifespan of our mines.

Our total community investment made in 2022 is over 32 million SAR:

	UNIT	2021	2022
Education and Training		23,110,000	25,749,329
Other social investment or charitable giving		450,938	453,500
Public & Government Relation and Sponsorship		340,359	1,501,200
Infrastructure	SAR	288,000	156,522
Environment, Energy & Climate Change		275,220	81,050
Community Development		207,500	4,177,602
Health & Welfare; Water & Sanitation		107,425	219,100

APPENDIX

NUMERICAL DATA USED IN THIS REPORT

This section is prepared for readers that need to collect and use our numerical performances regarding the management of material sustainability topics. For ease of comparison, the latest two years of data are provided together, where available. All performance-related statements, infographics, and graphs included in the other sections of this report are based on the numerical performance data summarized in this section, except our proprietary performance indicators.

Ma'aden is striving to enhance accuracy of our numerical data disclosed to our stakeholders, and therefore disclosing performance data of the latest three consecutive years. If any numerical data included in this report is restated from the same data disclosed in the previous reports, the data in this report has the highest accuracy.

DATA	UNIT	2020	2021	2022
Revenue				
Total Revenue	SAR Mn	18,580	26,769	40,277
Production				
Aluminum				
Fresh molten aluminum	Ton	796,009	805,056	776,413
Recycled aluminum (CRU+Remelt)	Ton	214,553	397,900	189,662
Gold				
Tons Mines	Ton	46,831,094	53,212,419	43,773,010
Au Produced	Ounces	408,831	343,346	326,620
Phosphate				
Phosphoric Acid P2O5	Ton	1,117,500	2,052,069	1,288,945
DAP-1 (as DAP Eq.)	Ton	2,947,102	2,852,069	2,546,162
DAP-2 (as DAP Eq.)	Ton	2,269,363	2,236,103	2,605,151
Ammonia-1	Ton	1,234,283	748,302	1,148,564
Ammonia-2	Ton	1,027,247	1,063,174	1,196,166
Sulfuric acid plant	Ton	4,780,072	8,818,430	3,943,092
Phosphoric Acid plant	MTP205	1,442,700	1,362,013	1,294,310
Bene- Phosphate Rock (Wet + Sizing)	DMT	6,098,561	5,576,545	5,693,699
Industrial Minerals				
CCM (Plant)	Ton	29,259	31,727	41,837
DBM (Plant)	Ton	65	19,908	20,562
MONO (Plant)	Ton	-	-	-
Ore (Ghazala)	Ton	55,662	112,519	176,049
Kaolin (Zabirah)	Ton	154,221	163,885	179,844
LGB (Zabirah)	Ton	599,801	750,067	841,883

PROTECTING THE ENVIRONMENT

DATA	UNIT	2020	2021	2022
Energy Consumption				
Total Energy Consumption	GJ	119,568,736	110,825,844	123,407,047
Natural Gas	GJ	42,960,461	39,488,902	52,042,048
Diesel and Heating Fuel	GJ	9,755,925	9,795,734	10,957,347
Crude Oil	GJ	1,912,900	-	-
Electricity Use	GJ	45,800,520	45,491,633	45,300,907
Electricity Use (in kWh)	kWh	12,722,366,677	12,636,564,732	12,583,585,394
Self-Generated (Waste Heat)	GJ	19,138,931	16,049,574	15,106,745
GHG Emissions				
Total on-site CO₂ emissions	Ton	14,222,774	12,337,564	13,900,977
Direct (Scope 1) CO ₂ emissions	Ton	8,625,631	7,133,515	9,461,014
Energy indirect (Scope 2) CO ₂ emissions	Ton	5,597,143	5,204,049	4,439,963
Ton CO₂/Ton Aluminium Production (Includes Scope 1 and 2 for MAC, MRC, MBAC)	Ton	1.84	1.76	1.60
Ton CO₂/Ton Phosphate Production (Includes Scope 1 and 2 for MPC)	Ton	0.81	0.62	0.78
Ton CO₂/Ton of Base Metals and NEW Minerals Production (Includes Scope 1 and 2 for BMNM)	Ton	36.14	39.72	44.51
Non-GHG Air Emissions				
SO ₂	Ton	24,237	22,616	22,080
NO ₂	Ton	2,448	1,627	1,863
Biodiversity				
Size of operational site in, or adjacent to, protected areas and areas of high biodiversity value	Km ²		4.79	9.79
Operational sites close to protected areas of high biodiversity	Count		1	2
IUCN Red List species and national conservation list species with habitats in areas affected by operations	Number of species		1	1
Significant impacts on biodiversity	Qual.		None	None
Material used for production				
Total materials used for production	Ton	32,809,258	29,083,145	20,493,948
Non-renewable materials	Ton	31,703,344	28,888,348	20,279,678
Renewable materials used	Ton	1,105,914	194,797	214,270
Waste generated and recovered				
Generated waste breakdown by type				
Solid hazardous waste generated	Ton	2,188,845	2,255,949	2,848,773
Solid non-hazardous waste generated	Ton	17,083	48,394	63,724
Liquid hazardous waste generated	M ³	14,872	11,834	14,628
Liquid non-hazardous waste generated	M ³	45,415	65,859	67,423
Recovered waste breakdown by type				
Solid hazardous waste recovered	Ton	7,290	8,196	5,460
Solid non-hazardous waste recovered	Ton	9,668	8,950	10,377
Liquid hazardous waste recovered	M ³	3,323	4,161	6,375
Liquid non-hazardous waste recovered	M ³	-	-	-
Water Withdrawal & Usage				
Water withdrawal by source	M³	55,811,952	58,791,422	62,032,002
Municipal water supply or water utility	M ³	5,426,916	6,244,850	8,124,926
Wetlands, rivers, lakes and oceans	M ³	16,063,985	15,992,666	15,265,433
Groundwater	M ³	32,846,407	35,137,898	36,098,160
Wastewater from other Organizations	M ³	1,474,644	1,416,008	2,543,483
Water sources significantly affected by withdrawal	Qual.	None	None	None
Volume of water recycled and reused	M³	4,950,028	5,138,333	1,601,205
Volume of water recycled and reused as a percentage of the total water withdrawal	%	8.87	8.74	2.58
Total water usage	M³	60,761,980	63,929,755	63,633,206
Total Water Discharge				
Water discharge by destination	M³		895,662,808	943,772,698
Discharge to surface water	M ³		-	-
Discharge to groundwater	M ³		-	-
Discharge to seawater	M ³		895,662,808	943,770,112
Discharge to third-party	M ³		-	2,586

TAKING CARE OF THE SOCIETY

DATA	UNIT	2020	2021	2022
EHSS Performance Rates				
Lost Time Injury Rate (LTIR) – Employee	–	0.07	0.09	0.06
Lost Time Injury Rate (LTIR) – Contractor	–	0.07	0.07	0.05
All Injury/Illness Frequency Rate (AFIR) – Employee	–	0.17	0.18	0.09
All Injury/Illness Frequency Rate (AFIR) – Contractor	–	0.24	0.20	0.14
Year-Over-Year Performance Rates				
SHER (Safety and Health Event Rate)	–	1.41	1.04	0.46
AIFR (All Injury/Illness Frequency Rate)	–	0.22	0.20	0.13
Recordable Injuries				
Fatalities (FAT) – Employees	Number of Employees	–	–	–
Fatalities (FAT) – Contractors	Number of Employees	–	1	–
Lost Time Injury (LTI) – Employees	Number of Employees	–	6	4
Lost Time Injury (LTI) – Contractors	Number of Employees	–	12	10
Restricted Duty Injury (RDI) – Employees	Number of Employees	–	2	–
Restricted Duty Injury (RDI) – Contractors	Number of Employees	–	6	4
Medical Treatment Injury (MTI) – Employees	Number of Employees	–	4	2
Medical Treatment Injury (MTI) – Contractors	Number of Employees	–	18	13
TOTAL HSE Incidents (Reportable) – Employees	Number of Employees	–	12	6
TOTAL HSE Incidents (Reportable) – Contractors	Number of Employees	–	37	27
TOTAL Hours Worked – Employees	Hours	–	13,085,459	13,387,961
TOTAL Hours Worked – Contractors	Hours	–	36,682,555	38,897,319
Employee Breakdown by Gender				
Total FTEs (Full Time Employees)	People	5,837	5,908	7,260
No. of FTEs (Full Time Employees) – Men	People	5,769	5,777	7,073
No. of FTEs (Full Time Employees) – Women	People	68	131	187
Local Nationals – Men	People	4,036	4,223	4,723
Local Nationals – Women	People	68	131	186
Managers & Directors – Men	People	249	289	331
Managers & Directors – Women	People	1	2	7
Global Contractors – Men	People	1,366	1,153	1,076
Global Contractors – Women	People	–	–	18
Employee Hire and Turnover by Gender				
Employees hired – Men	People	200	380	743
Employees hired – Women	People	27	54	96
Employees left – Men	People	300	318	332
Employees left – Women	People	6	10	20
FTE breakdown by Age Group				
Age Group <25	%	–	4	2
Age Group 25-40	%	–	61	66
Age Group 40-60	%	–	34	32
Age Group >60	%	–	1	0
Employee Training and Development				
Training Hours – Men	Hours	–	136,959	149,609
Training Hours – Women	Hours	–	3,438	9,868
Training Hours – Local	Hours	–	124,757	135,885
Training Hours – Expat	Hours	–	15,640	23,592
# of Employees Trained – Men	People	–	2,060	2,652
# of Employees Trained – Women	People	–	57	113
# of Employees Trained – Local	People	–	1,807	2,249
# of Employees Trained – Expat	People	–	310	516
Avg. Training Hours per Employee – Men	Hours	–	66.48	56.41
Avg. Training Hours per Employee – Women	Hours	–	60.32	87.33
Avg. Training Hours per Employee – Local	Hours	–	69.04	60.42
Avg. Training Hours per Employee – Expat	Hours	–	50.45	45.72
Social Investment Spending – School of Excellence				
Annual Spend	SAR Mn	21	23	20

ECONOMIC CONTRIBUTION

DATA	UNIT	2020	2021	2022
Total On-Shore Supply Chain Spend				
On-shore spend	SAR Mn	7,541	9,741	14,305
On-shore spend % of total	%	74	72	74
Off-shore spend	SAR Mn	2,586	3,842	5,025
Off-shore spend % of total	%	26%	28%	26%
Total On-Shore Goods Spend				
On-shore spend	SAR Mn	2,034	4,711	7,963
On-shore spend % of total	%	50	56	64
Off-shore spend	SAR Mn	2,059	3,695	4,425
Off-shore spend % of total	%	50	44	36
Community Investment				
Education and Training	SAR	–	23,110,000	25,749,329
Other social investment or charitable giving	SAR	–	450,938	453,500
Public & Government Relation and Sponsorship	SAR	–	340,359	1,501,200
Infrastructure	SAR	–	288,000	156,522
Environment, Energy & Climate Change	SAR	–	275,220	81,050
Community Development	SAR	–	207,500	4,177,602
Health & Welfare; Water & Sanitation	SAR	–	107,425	219,100

ASI REPORT FOR MA'ADEN ALUMINIUM

ASI 3.3b – Payment to Governments (Bauxite Mine)

GOVERNMENT ENTITY	2020	2021	2022*
Payment to Government Entity (SAR)	1,796,000	1,480,000	–

* no government payment in 2022

ASI 5.1 – Disclosure of GHG emissions and energy use

MA'ADEN ALUMINIUM AFFILIATES	UOM	MBAC	MAC	MRC	MA TOTAL
GHG Emissions					
Scope 1 CO ₂ e	Ton	842,517	1,442,885	71,981	2,357,383
Scope 2 CO ₂ e	Ton	291,609	3,662,140	92,503	4,046,252
Energy Use					
Natural Gas	GJ	2,907,401	2,503,331	1,272,096	6,682,828
Diesel and Heating Fuel	GJ	65,757	120,346	9,292	195,395
Crude Oil	GJ	–	–	–	–
Electricity Use	kWh	445,884,700	11,097,393,062	280,312,500	11,823,590,262

ASI 5.2a Aluminium Smelter GHG Emissions IntensityTon CO₂/Ton of Aluminum Production: Life Cycle assessment

PRODUCT	LCA – 2021	LCA – 2022
1 Ton of Liq Aluminium	9.67	9.28
1 Ton of Billet	9.83	9.89
1 Ton of Ingot	9.78	9.91
1 Ton of Automotive coil	8.76	11.22
1 Ton of Can Body	9.69	9.79

ASI 5.3 a-e – GHG Emissions Reduction Plans

Ma'aden Aluminium's target is to reduce Scope 1 & 2 GHG emission intensity by 50% by 2030. Ma'aden Aluminium will be scaling up production which with current technology would result in projected emissions of approximately 23 million tons of CO₂ in 2040. Ma'aden's reduction plan limits Ma'aden Aluminium's emissions to approximately 3 million tons by 2040. Ma'aden Aluminium is planning to achieve this reduction by increasing recycling (projected to cut 22.7% of emissions), introducing cleaner greenfield operations (projected to cut 43.5% of emissions) and retrofitting brownfield operations (projected to cut 33.8% of emissions).

6.4b -Public Disclosure of Spills and Leakages

PRODUCT	
Number of Spills Occurred	10
Volume of spills occurred	32.72 T
Type of Spills Occurred	Outside bunded area
Impact of Spills after incident	Soil contamination
Remediation Actions Taken	<ul style="list-style-type: none"> Contaminated soil disposal & replenish with clean soil Incident Investigation & Corrective action

ASI 6.5a- Waste Management and Reporting

MA'ADEN ALUMINIUM AFFILIATES	Unit	2022			MA'ADEN ALUMINIUM TOTAL
		MBAC	MAC	MRC	
Weight of Solid Hazardous Waste	Ton	2,824,867	7,338	4,809	2,837,013
Weight of Liquid Hazardous Waste	kl	125	2,818	10,827	13,770
Weight of Solid Non-Hazardous Waste	Ton	896	1,433	2,949	5,278
Weight of Liquid Non-Hazardous Waste	kl	–	–	–	–
Weight of Landfilled Waste	Ton	904	11,543	4,738	12,447
Weight of Recycled Waste	Ton	502	11,848	8,884	12,350

8.1a Biodiversity and Ecosystem Services Risk and Impact Assessment

Assess the risk to and potential impacts on Biodiversity and Ecosystem Services from the land use and activities within the Entity's Area of Influence.

MA has completed Biodiversity and Ecosystem services impact assessment for Baitha bauxite mine and RAK facilities and significant risk matrix.

As second phase of study Biodiversity & Eco-systems services management system will be developed and implemented to mitigate significant impact through continual improvement cycles.

GRI CONTENT INDEX

Statement of Use	Ma'aden has reported the information cited in this GRI content index for the period 1 st January to 31 st December 2022 with reference to the GRI Standards.
GRI 1 Used	GRI 1: Foundation 2021

GRI STANDARD	DISCLOSURE	LOCATION	
GRI 2: General Disclosures 2021	2-1 Organizational details	About Ma'aden (p.7)	
	2-2 Entities included in the organization's sustainability reporting	Report Boundary (Inside Cover)	
	2-3 Reporting period, frequency and contact point	Reporting Period (Inside Cover)	
	2-4 Restated Information	Rationale and result of restatement are explained where restatement is included	
	2-5 External assurance	Report Assurance (pp.86-91)	
	2-6 Activities, value chain and other business relationships	Operations and Businesses (pp.13-15)	
	2-7 Employees	Numerical Data Used in this Report (p.80)	
	2-8 Workers who are not employees	Numerical Data Used in this Report (p.80)	
	2-9 Governance structure and composition	Ma'aden Homepage	
	2-10 Nomination and selection of the highest governance body	Nomination & Remuneration Committee Charter	
	2-11 Chair of the highest governance body	Ma'aden Homepage	
	2-12 Role of the highest governance body in overseeing the management of impacts	Sustainability Governance (pp.16-19)	
	2-13 Delegation of responsibility for managing impacts	Sustainability Governance (pp.16-19)	
	2-14 Role of the highest governance body in sustainability reporting	Materiality Assessment (pp.24-27)	
	2-15 Conflicts of interest	Conflict of Interest Policy	
	2-16 Communication of critical concerns	Corporate Governance Framework	
	2-17 Collective knowledge of the highest governance body	Corporate Governance Framework	
	2-18 Evaluation of the performance of the highest governance body	Corporate Governance Framework	
	2-19 Remuneration policies	Articles of Association	
	2-20 Process to determine remuneration	Corporate Governance Framework	
	2-22 Statement on sustainable development strategy	Executive Messages (pp.2-5)	
	2-23 Policy commitments	Code of Conduct	
	2-24 Embedding policy commitments	Code of Conduct	
	2-28 Membership associations	UNGC Commitment & Alignment with Global/Local sustainability goals (pp.40&41)	
	2-29 Approach to stakeholder engagement	Stakeholder Engagement (pp.38-39)	
	GRI 3: Material Topics 2021	3-1 Process to determine material topics	Materiality Assessment (pp.24-27)
		3-2 List of material topics	Materiality Assessment (pp.24-27)
		3-3 Management of material topics	Protecting Our Environment (pp.42-55) Taking Care of Society (pp.56-71) Economic Contributions (pp.72-77)

GRI STANDARD	DISCLOSURE	LOCATION
GRI 203: Indirect Economic Impacts 2016	203-1 Infrastructure investments and services supported	Numerical Data Used in this Report (p.81)
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	Numerical Data Used in this Report (p.81)
GRI 205: Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	100% of operations included in report boundary
	205-3 Confirmed incidents of corruption and actions taken	2022 ESG performance Highlights (p.21)
GRI 206: Anti-competitive Behavior 2016	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	2022 ESG performance Highlights (p.21)
GRI 301: Materials 2016	301-1 Materials used by weight or volume	Numerical Data Used in this Report (p.79)
GRI 302: Energy 2016	302-1 Energy consumption within the organization	Numerical Data Used in this Report (p.79)
GRI 303: Water and Effluents 2018	303-3 Water withdrawal	Numerical Data Used in this Report (p.79)
	303-4 Water discharge	Numerical Data Used in this Report (p.79)
	303-5 Water consumption	Numerical Data Used in this Report (p.79)
GRI 304: Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Numerical Data Used in this Report (p.79)
	304-2 Significant impacts of activities, products and services on biodiversity	Numerical Data Used in this Report (p.79)
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	Numerical Data Used in this Report (p.79)
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	2022 Sustainability Footprint Progress (p.23)
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	Numerical Data Used in this Report (p.80)
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	Numerical Data Used in this Report (p.80)
	403-9 Work-related injuries	Numerical Data Used in this Report (p.80)
	403-10 Work-related ill health	Numerical Data Used in this Report (p.80)
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	Numerical Data Used in this Report (p.80)
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	Ma'aden Homepage
GRI 413: Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	Community Engagements (p.66)
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	2022 Sustainability Footprint Progress (p.23)



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كي بي إم جي للاستشارات المهنية

واجهة الرياض، طريق المطار
صندوق بريد ٩٢٨٧٦
الرياض ١١٦٦٣
المملكة العربية السعودية
مجل تجاري رقم ١٠١٠٤٢٥٤٩٤

المركز الرئيسي في الرياض

Independent limited assurance report to Saudi Arabian Mining Company (Ma'aden) on selected quantitative indicators disclosed in Ma'aden's Sustainability Report for the year ended 31 December 2022

To the management of the Saudi Arabian Mining Company (Ma'aden)

We have been engaged by the management of the Saudi Arabian Mining Company ("the Company", "Ma'aden") to carry out a limited assurance engagement in order to state whether anything has come to our attention that causes us to believe that the subject matter information detailed below ("Subject Matter"), has not been prepared, in all material respects, in accordance with the applicable criteria ("Applicable Criteria") as set out below.

Subject Matter

The Subject Matter for our limited assurance engagement were the selected quantitative indicators ("the Indicators") as detailed in Annexure 1(a) of this report, as detailed Ma'aden's 2022 Sustainability Report for the year ended 31 December 2022 ("the Report"), as prepared and presented by the management of the Company.

The Indicators are based on the reporting boundary developed by the Company which consists of the Company and its seven affiliated entities under its operational control which are detailed in Annexure 1(b) of this report.

Applicable Criteria

The Applicable Criteria for this limited assurance engagement were the reporting requirements of the consolidated Global Reporting Initiative ("GRI") standards, as issued by the Global Sustainability Standards Board ("GSSB") and as applicable to the respective Indicators in scope, the details of which are mentioned in Annexure 2 of this report.

Saudi Arabian Mining Company's responsibility

The management of the Company is responsible for preparing and presenting the Subject Matter information that is free from material misstatement in accordance with the Applicable Criteria and for the information contained therein.

This responsibility includes: designing, implementing and maintaining internal control relevant to the preparation and presentation of the Subject Matter information that is free from material misstatement, whether due to fraud or error. It also includes developing the Applicable Criteria as the criteria against which to evaluate the Subject Matter information.

The management of the Company is also responsible for preventing and detecting fraud and for identifying and ensuring that the Company complies with the laws and regulations applicable to its activities. The management of the Company is responsible for ensuring that staff involved with the preparation of the Subject Matter information are properly trained, systems are properly updated and that any changes in reporting encompass all significant business units.



Independent limited assurance report

Our responsibility

Our responsibility is to examine the Subject Matter information prepared by the Company and to report thereon in the form of an independent limited assurance conclusion based on the procedures we have performed and the evidence obtained. We conducted our engagement in accordance with the International Standard on Assurance Engagements ("ISAE") 3000 (Revised) *Assurance Engagements Other Than Audits or Reviews of Historical Financial Information* and ISAE 3410 *Assurance Engagements On Greenhouse Gas Statements* as endorsed in the Kingdom of Saudi Arabia and the terms and conditions for this engagement as agreed with the Company's management. ISAE 3000 (Revised) and ISAE 3410 require that we plan and perform the engagement to obtain limited assurance about whether the Subject Matter information has been properly prepared, in all material respects, in accordance with the Applicable Criteria.

Our firm applies the International Standard on Quality Management 1, which requires the firm to design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

We have complied with the independence and other ethical requirements of the International Code of Ethics for Professional Accountants (including International Independence Standards) that is endorsed in the Kingdom of Saudi Arabia, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

The procedures selected depend on our understanding of the Subject Matter and other engagement circumstances, and our consideration of areas where material misstatements are likely to arise.

In obtaining an understanding of the Subject Matter information and other engagement circumstances, we have considered the process used to prepare the Subject Matter information in order to design assurance procedures that are appropriate in the circumstances, but not for the purposes of expressing a conclusion as to the effectiveness of the Company's internal control over the preparation and presentation of the Subject Matter information. A limited assurance engagement in accordance with ISAE 3000 (Revised) and ISAE 3410 involves assessing the risks of material misstatement of the Subject Matter information, whether due to fraud or error, responding to the assessed risks as necessary in the circumstances of the engagement and evaluating the overall presentation of the Subject Matter information.

Our engagement also included: assessing the appropriateness of the Subject Matter, the suitability of the criteria used by the Company in preparing the Subject Matter information in the circumstances of the engagement, evaluating the appropriateness of the procedures used in the preparation of the Subject Matter information and the reasonableness of estimates made by the Company.

Limited assurance is less than absolute assurance and reasonable assurance. The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

As part of this engagement, we have not performed any procedures by way of audit, review or verification of the Subject Matter information nor of the underlying records or other sources from which the Subject Matter information was extracted.

Procedures performed

Our limited assurance engagement on the Subject Matter information consisted of making enquiries, primarily of persons responsible for the preparation of the Subject Matter information, and applying analytical and other procedures, as appropriate. These procedures were based on our professional judgement and included the following, amongst others, for the year ended 31 December 2022:

- Obtaining an understanding of the collection, compilation and reporting processes for Ma'aden, including obtaining an understanding of internal controls, systems and processes relevant to the preparation of the Subject Matter;
- Interviewing management and other relevant staff / personnel at corporate / Headquarter ("HQ") level responsible for data collection, data management, and data analysis pertaining to the Indicators in scope;
- Reviewing management documentation and Company data reporting tools to the extent they underpin the preparation of the Subject Matter;
- Performing analytical reviews, where applicable, for the Indicators;
- Assessing the appropriateness of the conversion factors applied by the Company in arriving at Indicator's quantitative data in accordance with the assigned unit of reporting, where applicable;
- Obtaining inventory data for each selected Indicator, at aggregated HQ level, as per the reporting boundary developed by management and agreeing the data with the information detailed in the Subject Matter;
- Obtaining inventory breakdown data for each selected Indicator, at site level, as per the reporting boundary developed by management;



Independent limited assurance report

Procedures performed (continued)

- Selecting a sample of sites, and performing the following for each selected site in relation to the Indicators:
 - Agreeing the Indicator's information from records prepared by the management to the Subject Matter;
 - Obtaining supporting evidence, source data, underlying records, or reports for selected data points to reconcile site level information;
 - Checking completion / aggregation of quantitative data for the Indicators to include all sites in the reporting boundary set by the management;
 - Performing recalculation (where applicable) of the Indicator data of selected site based on site level data obtained from system outputs, reports and other relevant records, and the relevant factors applied; and
 - Comparing results of the recalculation of above site level data with site level information used by the management to determine the total Indicator value. Where variances are noted, reviewing the rationale for the variances.

Characteristics and limitations

Due to the inherent limitations of any internal control structure, it is possible that errors or irregularities in the information presented in the Subject Matter may occur and not be detected. The assurance relies on documentation furnished by the Company and interactions with relevant personnel within the Company to validate the self-assessment. Our engagement is not designed to detect all weaknesses in the internal controls over the preparation of the Subject Matter information as the procedures performed were undertaken on a test basis.

Our engagement was not designed to test, verify or audit the completeness and accuracy of system outputs from the Company.

Furthermore, for the purpose of this limited assurance engagement, we have not performed any procedures around:

- Checking of any claims or qualitative information in the Report other than the quantitative data for the Indicators in scope as mentioned in the Subject Matter information above;
- Checking the Indicators in reference to other international frameworks such as United Nations Sustainability Development Goals ("UNSDG"), United Nation Goal Compact ("UNGC") or International Council of Mining and Metals ("ICMM") principles. The Indicators were assessed on the basis of the Applicable Criteria only;
- Assessing compliance of any other indicators or related information, either qualitative or quantitative, which is not part of the Subject Matter information, featuring in the Report with the disclosure requirements of the Applicable Criteria;
- Assessment of accuracy and completeness of the reporting boundaries determined by the management for the purposes of the Report;
- Audit, review or verification of the Subject Matter information nor of the underlying records or other sources from which the Subject Matter information was extracted;
- Assessing the appropriateness of the materiality approach applied by management in preparation of the Report;
- Checking the accuracy of the GRI content indexation, as featured in the Report;
- Detecting any weaknesses in the internal controls over the preparation of the Subject Matter information as the procedures performed will be undertaken on a test basis; and
- Testing, verifying or auditing the completeness and accuracy of outputs from Ma'aden's data collecting systems used for the compilation of the Subject Matter information.

Furthermore, our limited assurance engagement entailed performing assurance procedures around the calculation of the Indicators in accordance with the *compilation approach* demonstrated in the disclosure requirement of the respective GRI standard used to calculate the performance Indicator only. We have therefore not assessed the completeness of the disclosure requirements provided by the applicable GRI standards as part of our limited assurance engagement.



Independent limited assurance report

Limited assurance conclusion

Our conclusion has been formed on the basis of, and is subject to, the matters outlined in this report. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Based on the procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the Subject Matter information is not prepared, in all material respects, in accordance with the Applicable Criteria.

Restriction of use of our report

Our report should not be regarded as suitable to be used or relied on by any party wishing to acquire rights against us other than the Company, for any purpose or in any context. Any party other than the Company who obtains access to our report or a copy thereof and chooses to rely on our report (or any part thereof) will do so at its own risk. To the fullest extent permitted by law, we accept or assume no responsibility and deny any liability to any party other than the Company for our work, for this independent limited assurance report, or for the conclusions we have reached.

Our report is released to the Company on the basis that it shall not be copied, referred to or disclosed, in whole (save for the Company's own internal purposes) or in part, without our prior written consent.

KPMG Professional Services



Fahad Mubark Aldossari
License no: 469



Riyadh, 10 July 2023
Corresponding to: 22 Dhul Hijjah 1444H

Annexure 1

(a) Details of the selected quantitative indicators ("the Indicators") comprising of the Subject Matter:

Indicator	Page number of sustainability report 2022 where the indicators are disclosed
Lost time injury ("LTI") and Lost Time Injury Rate ("LTIR")	59 (LTI) & 60 (LTIR)
Total Fatalities	60
Total training hours	65
Community investment (total spend value)	77
Greenhouse gas emissions (Total Scope 1 and Scope 2)	44
Energy consumption	45
Waste Management (Hazardous and Non-hazardous waste generated and recovered)	51
Water usage	52

(b) Details of affiliated entities under operational control of the Company included in the reporting boundary established for the preparation of the Ma'aden's 2022 Sustainability Report.

- 1) Ma'aden Rolling Company ("MRC")
- 2) Ma'aden Bauxite and Alumina Company ("MBAC")
- 3) Ma'aden Aluminium Company ("MAC")
- 4) Base Metals & New Minerals ("BMNM")
- 5) Industrial Minerals Company ("IMC")
- 6) Ma'aden Wa'ad Al Shamal Phosphate Company ("MWSPC")
- 7) Ma'aden Phosphate Company ("MPC")

Annexure 2

Applicable requirements of GRI standards, as applicable to the respective Indicator in scope, comprising of the Applicable Criteria

Indicator	Applicable component of disclosure of related GRI Standard
Lost time injury ("LTI")	Clause (iii) of Requirement (a) and (b) of Disclosure 403-9 "Work-related injuries" of GRI standard 403 "Occupational Health and Safety 2018"
Lost Time Injury Rate ("LTIR")	Compilation requirement 2.1.4 of Disclosure 403-9 "Work-related injuries" of GRI standard 403 "Occupational Health and Safety 2018"
Total fatalities	Clause (i) of Requirement (a) and (b) of Disclosure 403-9 "Work-related injuries" of GRI standard 403 "Occupational Health and Safety 2018"
Total training hours	Guidance for Disclosure 404-1 "Average hours of training per year per employee" of GRI standard 404 "Training and Education 2016"
Community Investment (total spend value)	Guidance related to "Community investment" mentioned in Guidance for Disclosure 201-1 "Direct economic value generated and distributed" of GRI Standard 201 "Economic Performance 2016"
Greenhouse Gas Emissions (Total Scope 1 and Scope 2)	Compilation requirement 2.1 and 2.2 of Disclosure 305-1 Direct (Scope 1) GHG emissions & compilation requirement 2.3 and 2.4 of Disclosure 305-2 Energy indirect (Scope 2) GHG Emissions of GRI Standard 305 "Emissions 2016"
Energy consumption	Compilation requirements of Disclosure 302-1 Energy consumption within the organization of GRI Standard 302 "Energy 2016"
Waste Management (Hazardous and Non hazardous waste generated and recovered)	Compilation requirements of Disclosure 306-3 "Waste generation and significant waste-related impacts" of GRI standard 306 "Waste 2020"
Water usage	Requirement (a) of Disclosure 303-3 "Water withdrawal" for Water withdrawal by source & Requirement (a) of Disclosure 303-5 "Water consumption" for water usage related to GRI standard 303 "Water and Effluents 2018"



LEADING THE WAY

SUSTAINABILITY REPORT 2022