

# SUSTAINABILITY REPORT 2021

## BECOMING A MINING ESG ROLE MODEL



**Ma'aden's 2021 Sustainability Report, *Becoming a Mining ESG Role Model***, details the company's approach to managing our material environmental, social and governance topics and outlines our performance against corporate sustainability objectives and strategies. This Sustainability Report has been prepared in accordance with the Global Reporting Initiative (GRI) Standards: Core Option, and covers Ma'aden's operations during 2021, including 7 affiliates and corporate headquarters located in the Kingdom of Saudi Arabia. An upcoming 8<sup>th</sup> affiliate, Ma'aden Fertilizer Company (MFC), which is still in development is not included in the scope of this Report. A summary of our alignment with the GRI Standards, International Council on Mining & Metals (ICMM) Principles and United Nations Sustainable Development Goals (UN SDGs) can be found in the Appendix.

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## MESSAGE FROM THE CEO



**Robert Wilt**  
Chief Executive Officer

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**As we look ahead, we understand our responsibility to serve all our stakeholders, meet and advance our ESG targets, develop the best future. talent and facilitate sustainable growth.** //

Our commitment to being a sustainable mining champion with a global presence has remained central to our strategy throughout 2021, despite lingering challenges from the ongoing COVID-19 pandemic.

Over the past year, Ma'aden has focused its Sustainability strategy on Environmental, Social and Governance (ESG) issues in alignment with the Kingdom's Vision 2030 goals, industry frameworks, such as the International Council on Mining and Metals (ICMM), and Ma'aden's own Sustainability Framework. By integrating Sustainability into how we do business, we are driving value creation for our business, our stakeholders, our communities and our planet as we grow and advance our position as an ESG leader for the mining industry.

### INSTITUTIONALIZING ESG TARGETS FOR ACCOUNTABILITY AND PERFORMANCE

In 2021, we took great strides to institutionalize an ESG-focused approach with structured key performance indicators (KPIs), metrics and targets to hold us accountable for managing our performance and achieving meaningful progress.

We have put in place a set of 2040 ESG goals with 2030 milestones, which include:

- 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

Throughout this report, we highlight the ESG initiatives and accomplishments of our affiliate companies as well as company-wide efforts and the aspirational goals Ma'aden is working towards. In order to remain accountable to our stakeholders, this report includes KPIs and disclosures on the ESG matters that are most material to our business, our host communities and our wider stakeholder groups, in alignment with local and global leading practice frameworks and standards, such as Vision 2030, GRI, ICMM and others.



### DRIVING LOCAL SOCIAL IMPACT AS A GLOBAL LEADER

As part of our commitment to advance the Kingdom's Vision 2030 plan for socioeconomic development, we are working to promote the local Saudi economy and society by strengthening our local workforce in all regions and serving as an ambassador for Saudi Arabia everywhere in the world we do business.

Within the Kingdom, we are committed to the government's nationalization plans, giving priority to the communities near our operations, where we are actively investing in high-impact community development efforts. An effort we are particularly proud of is Ma'aden's investment of over 100M SAR over the past six years into two high schools in the Northern Borders Region, providing educational opportunities to remote students who have since been able to join peers from major cities in top universities and professional degree programs.

We continue to increase Saudization in our workforce and supplier base, progressing our year-over-year positive trend to 74% Saudization in our employee base and 45% in our supply chain in 2021. We also remained committed to protecting the wellbeing of our people and communities, advancing our COVID-19 community response strategy through providing 25,000 vaccinations to all employees, contractors and external service workers that entered Ma'aden's premises.

### FUTURE GROWTH

As we look ahead, we understand our responsibility to serve all our stakeholders, meet and advance our ESG targets, develop the best future talent and facilitate sustainable growth. Being a leader in ESG matters is essential to our success, and we are working hard to embed ESG into the DNA of our strategy, our operations, our people and our culture – now, and for the future.

Ma'aden is leading the way in the diversified mining and metals industry in Saudi Arabia and is among the fastest growing of such companies in the world. The company has four focus areas that serve markets globally.



1. **GOLD** is our most well-known product line, dating back to the beginnings of recorded history. Our Mahad Ad Dhahab (*"cradle of gold"*) mine was actively mined as early as 3,000 years ago.
2. **ALUMINIUM** is one of the world's most versatile metals and a fitting symbol of our evolution as a company. Just as aluminium is shaped and transformed into a vast array of recyclable goods, it has shaped and transformed Ma'aden into a world-class, future-focused company.
3. **PHOSPHATES** are a naturally occurring form of the element phosphorus, one of the three primary nutrients required for photosynthesis and crop growth.
4. **INDUSTRIAL MINERALS** comprise our fourth area of focus—materials other than fuel, metal or gemstones mined for commercial value.

We have achieved rapid growth over the past decade to become the largest multi-commodity mining company in the Middle East and a global mining industry leader in terms of market capitalization.

**MA'ADEN BY THE NUMBERS**



# VISION, MISSION & VALUES



## MA'ADEN VISION

Be a sustainable mining champion with a global presence.



## MA'ADEN MISSION

Lead the development of the mining industry in Saudi Arabia by maximizing the value of the mineral resources while developing to be a Saudi Global Mining Giant.



## MA'ADEN VALUES

Through our four values—**Ownership, Integrity, Teamwork** and **Care**—Ma'aden continues our commitment to contribute to economic development and our own long-term performance while responsibly managing the Environmental, Social and Governance (ESG) issues that are most material to our business.



### INTEGRITY

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



### CARE

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



### TEAMWORK

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



### OWNERSHIP

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

# 2021 ESG PERFORMANCE HIGHLIGHTS

## BUSINESS INTEGRITY & ETHICS



# ZERO

incidents of corruption or anti-competitive behavior in 2021

**ZERO** cases, fines or non-monetary sanctions related to non-compliance with socioeconomic laws

**100%** of new suppliers in 2021 were screened using social criteria

## LOCAL CONTENT



# 74%

Increased share of local national employees from 70% in 2020 to 74%



# 136

Decreased global contractor personnel headcount by 136

## COMMUNITY INVESTMENT



# SAR 23M

Continued our six-year investment developing two "Schools of Excellence" high schools in the Northern Borders Region with an additional 23m SAR in 2021

# SAR 25M

Spent 25m SAR on other Community and Social Investment in 2021

## HEALTH AND SAFETY



Implemented the new EHSS Management System (MSHEM) **ACROSS ALL OF MA'ADEN**

# 18%

Continued the year-over-year trend, reducing the Health, Safety and Environment (HSE) incident rate by an additional 18% from 2020 to 2021

## DIVERSITY, EQUITY AND INCLUSION



# 131

Increased the number of female full-time employees from 68 in 2020 to 131 in 2021

Increased training hours per employee **ACROSS ALL EMPLOYEE CATEGORIES** (men, women, local and expat)

## ENVIRONMENT



# 29%

Improved overall emissions intensity (Ton CO<sub>2</sub>e / Million SAR of Revenue) by approximately 29%

(This improvement is due to higher commodity prices in 2021)

“Over the past few years, we have seen the mining industry grow to become an important contributor to the world’s economic, social and environmental goals...I believe the future is mining.”

Ma’aden’s Chairman, H.E. Yasir Al-Rumayyan



## OUR APPROACH

### SUSTAINABILITY FRAMEWORK

Ma’aden’s Sustainability Framework was established in 2019 in alignment with leading responsible mining standards and sustainability frameworks to drive the integration of our sustainability management practices under a single company-wide framework within all of our operations.

This Framework helps Ma’aden work towards meeting the highest ESG standards in our industry, and the framework goals were further mapped to the *United Nations Sustainable Development Goals*.

### OUR EIGHT SUSTAINABILITY GOALS:

1. Create a “zero-harm” work environment
2. Provide employees with a nurturing work environment that improves health and wellbeing
3. Be a welcome neighbor to our host communities globally
4. Contribute positively to the economies and communities where we operate
5. Be a steward of responsible water management
6. Evolve our business practices to ensure climate resilience, ecological preservation and environmental justice at each of our operations
7. Strive to reduce waste and impact associated with our sourcing, operations and materials across our value chain and products’ lifecycles
8. Gain international recognition for being a sustainable company driven by robust business practices, innovation and values

### MA’ADEN SUSTAINABILITY GOALS



# OUR APPROACH

## SUSTAINABILITY GOVERNANCE

In 2018, we created the Board-level Safety and Sustainability Committee (SSC) to review all policies, management processes and business plans related to ESG issues and ensure that appropriate financial and human resources are allocated to sustainability initiatives and reporting. This structure sets the foundation for managers at each Ma'aden affiliate to:

- Effectively oversee newly implemented sustainability practices
- Track relevant ESG metrics
- Take an active role in integrating sustainability into their core business operations
- Analyze and report on ESG risks specific to their operation
- Continually engage and communicate with their stakeholders on material ESG issues

## MATERIALITY

Ma'aden completed its first Materiality Assessment three years ago to identify which areas of our business have the most impact (effect on the economy, the environment and society) as well as provide a guide for decision-making and strategic planning.

Last year, we conducted a "Materiality Refresh" for the 2020 reporting cycle, which was inclusive of desktop research on

industry trends, management surveys and leadership interviews, to ensure we are continuing to focus our attention on the material ESG issues most critical to the current state of our business. We incorporated key topics from frameworks such as Vision 2030, ICMM, the SDGs and GRI, with particular focus to those topics that were previously identified as priorities for Ma'aden. These refreshed material topics provided Ma'aden with an up-to-date perspective of the impacts of our business and served as a guide for the improved data measurements and disclosures in the 2020 report, which have been continued forward for this report. Formal stakeholder communication on materiality was not conducted in 2021, but another Materiality Review is planned for next year to again ensure we are continually understanding our stakeholders' most up-to-date concerns.

As per our 2020 refreshed material topics list, Business integrity, Health & Safety, Economic Development, Local Content Development, Regulatory & Legal Compliance, Social Initiatives, Water Resources & Quality Management, Hazardous Materials Management, Air Quality, Climate Change and Energy Efficiency remained our main focus during 2021. Topics like Climate Change and Energy Efficiency, Air Quality, Hazardous Materials Management, Regulatory & Legal Compliance, Water Resources & Quality Management, Health & Safety are covered

under the MSHEM (Ma'aden Safety Health and Environmental Management) standards which are implemented by all Ma'aden affiliates. Other topics are governed by individual management systems, such as Business Integrity being covered by Ma'aden's Code of Conduct procedures, Local Content Development being

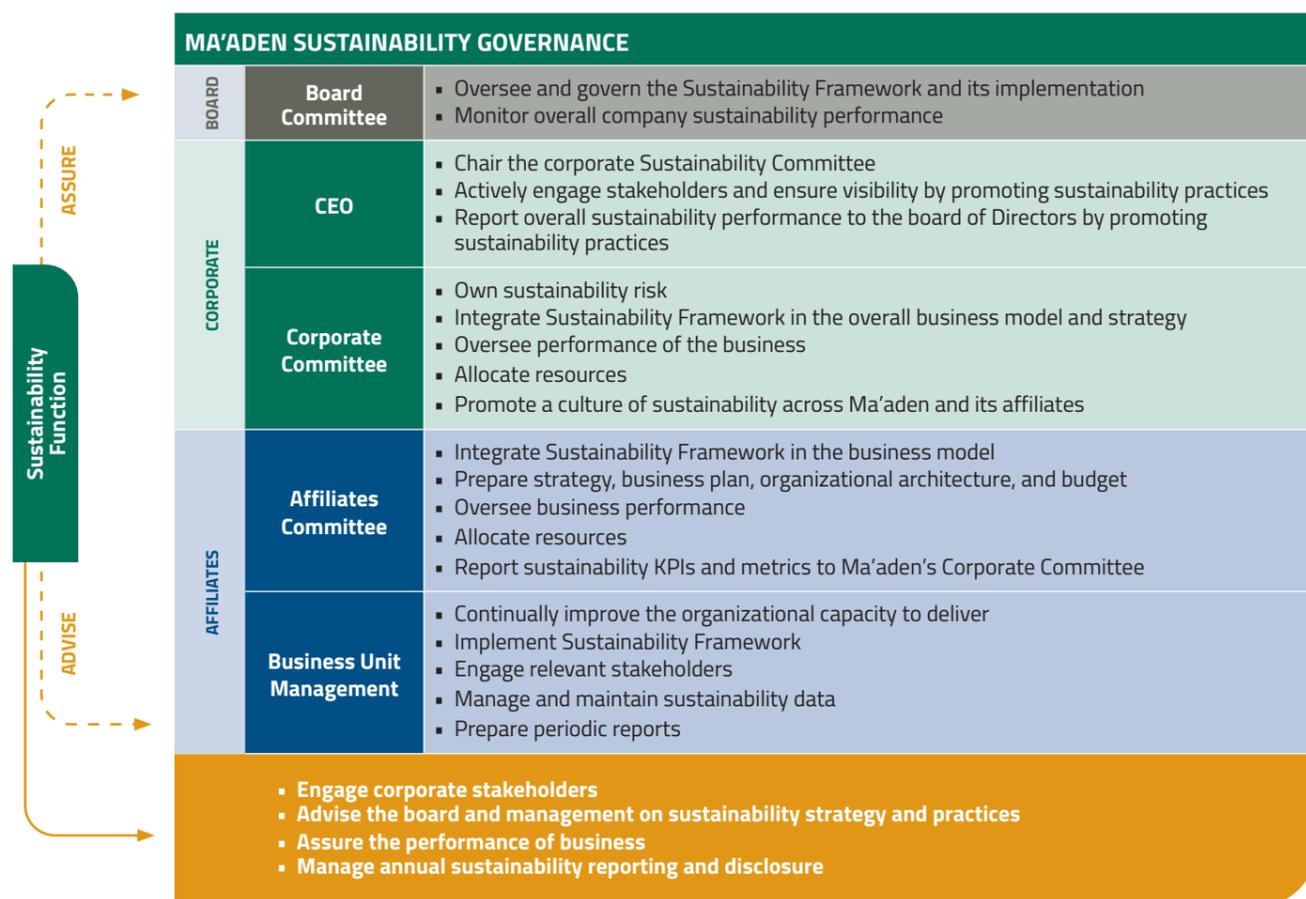
covered by a special annex in each project contract to ensure local content preference and development, and Social Initiatives being governed by social procedures under the Corporate Sustainability department.

## FUTURE TARGETS

In 2021, we conducted a Sustainability Footprint using 2020 as our baseline year and used this footprint to outline a set of 2040 goals with 2030 milestones.

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.

FUTURE TARGETS	
	Reduce Scope 1 & 2 GHG emissions intensity by 60% by 2040
	Decrease groundwater usage intensity by 65% by 2040
	Decrease waste to landfill intensity by 80% by 2040
	Increase renewable energy usage to 20% by 2040
	Increase ESG screening of suppliers to 75% by 2040



2040 ESG TARGETS AND 2030 MILESTONES			
	2020	2030	2040
Scope 1 & 2 GHG (CO <sub>2</sub> e) Emissions <sup>1</sup>	100%	63%	40%
Renewable Energy <sup>2</sup>	0%	10%	20%
Groundwater Use <sup>3</sup>	100%	54%	35%
Waste to Landfill <sup>4</sup>	100%	39%	20%
Local National Employees	70%	80%	85%
Local Female Employees	1%	6%	15%
Community Engagement Maturity Score <sup>5</sup>	3	4	4
ESG Screening of Suppliers	0%	50%	75%

TARGETS ARE % INDEXED TO 100% AS 2020 BASELINE:

1. CO<sub>2</sub> emitted / revenue
2. Share of carbon neutral energy sources such as solar, wind, rain, tidal, wave, and geothermal heat in overall energy mix
3. Groundwater used / revenue
4. Landfilled waste / revenue
5. According to Ma'aden grading scheme that measures the level of establishment of ESG related systems and resources across company sites (Scale 1-5)

Alternative ways of KPI calculation are being evaluated to eliminate commodity price fluctuations.

## BUSINESS EXCELLENCE

“Business Excellence,” or Business Integrity & Ethics, is one of Ma’aden’s core values, one of the eight topics on our Sustainability Framework and a foundational priority for our new ESG Strategy. Business Excellence entails maintaining a culture committed to operating honestly, fairly and with the highest ethical and industry standards in the relationships we establish with our employees, our suppliers, our customers and all other stakeholder groups, like the communities in which we operate.



### ZERO

incidents of corruption or anti-competitive behavior



### ZERO

incidents of forced, compulsory or child labor and no identified risks of such incidents occurring in our operations



### ZERO

cases, fines, or non-monetary sanctions related to non-compliance with socioeconomic laws and regulations

We conduct our business in compliance with all applicable laws and regulations and pay careful attention to anti-corruption practices, codes of conduct, information privacy and transparency. In 2021, 100% of our operations were assessed for risks related to corruption, and no significant risks of any kind were identified. 100% of Ma’aden’s business partners received communications on Ma’aden’s anti-corruption policies, and no incidents where business partner contracts had to be terminated due to anti-corruption violations occurred in 2021. Similarly, 99% of employees and 100% of governance body members received both communications and training on Ma’aden’s anti-corruption policies. Furthermore, in 2021 Ma’aden experienced no legal cases regarding anti-competitive behavior.



## BUSINESS EXCELLENCE

Additionally, after launching our Code of Conduct e-learning course, a four-part course covering Ma’aden Code of Conduct policies and subjects, in 2020, Ma’aden’s compliance group added this platform as a required component of our 2021 ESG objectives and we achieved 100% of all Ma’aden employees and contract staff successfully passing the course with re-certification to occur again in 30 months’ time.

As aluminium and bauxite mining have a particularly complex array of stakeholders, Ma’aden’s aluminium affiliates further aligned their operations and reporting with leading governance practices in the aluminium industry throughout 2021. The group continued to disclose its legal payments made to governments in relation to aluminium and bauxite operations and recorded spills occurred in 2021, both in alignment with the *Aluminium Stewardship Initiative (ASI) Performance Standards*:

Aluminium Stewardship Initiative (ASI) Performance Standard		
ASI 3.3 Payments to Governments: Ma’aden Aluminium Company (MAC)		
Operating Unit	Government Entity	Amount
MAC- Mine Operating Unit	Ministry of Industry and Mineral Resources	SAR 1,480,000

*This payment amount was for fees, and not political contributions. For more information see Appendix p.49.*

ASI 6.4 Reporting of Spills	
Ma’aden Bauxite and Alumina Company (MBAC)	
Number of Spills Occurred	13
Volume of Spills Occurred	5.263 MT
Type of Spills Occurred	Outside Bounded Area
Impact of Spills after incident	Soil Contamination
Remediation Actions Taken	<ul style="list-style-type: none"> <li>▪ Site cleaning</li> <li>▪ Contaminated soil disposal &amp; replacement with clean soil</li> <li>▪ Incident investigation &amp; corrective actions</li> </ul>
Ma’aden Rolling Company (MRC)	
Number of Spills Occurred	1
Volume of Spills Occurred	2 m <sup>3</sup>
Type of Spills Occurred	Acid solution spill as two totes tilted while handling with forklift in chemical bulk storage of Finishing plant
Impact of Spills after incident	Entirety of spill occurred on paved concrete floor, and nothing reached the natural environment
Remediation Actions Taken	<ul style="list-style-type: none"> <li>▪ Spill quantity was collected using sorbent material (sand)</li> <li>▪ Disposed to regulatory approved waste disposal facility</li> </ul>

*These spills did not result in any socio-economic impacts.*

## LOCAL CONTENT

Inspired by Vision 2030, and with the Kingdom’s geological potential, Ma’aden is set to grow and champion the development of Saudi Arabia’s mining sector. As the fastest growing mining company in the world, this growth provides Ma’aden with a unique opportunity to contribute to the development of Local Content in KSA to create opportunities for individuals and new and existing businesses throughout the Mining Industry Supply Chain:

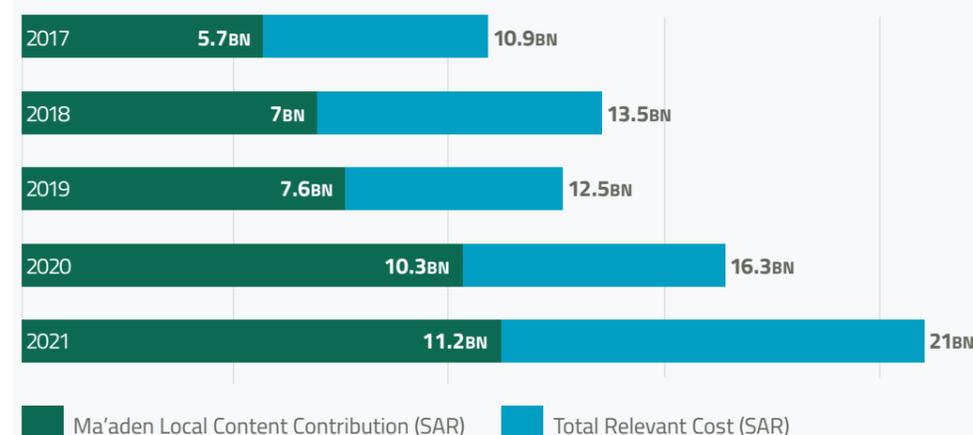


Our vision for Local Content is to maximize the contribution of the mining industry to the Kingdom of Saudi Arabia through spend on Saudi components within labor, goods, services, assets and technology. We are achieving this vision by focusing on five **Local Content Strategic Objectives**:

- 
**SAUDI EMPLOYMENT**  
 Maximise employment opportunities for KSA nationals
- 
**LOCAL BUSINESS**  
 Maximise participation of Local businesses in our supply chain
- 
**LOCAL SMEs**  
 Maximise opportunities for Local SMEs
- 
**REMOTE REGION**  
 Maximise economic opportunities for communities in remote regions
- 
**MINING INDUSTRY**  
 Drive Local Content throughout the mining industry supply chain

## LOCAL CONTENT

### TOTAL COMPANY LOCAL CONTENT CONTRIBUTION (2017—2021)



Ma’aden made excellent progress in 2021. Of our total procurement spend, excluding banks, of 13.6bn SAR, 72% was placed with companies in KSA. This led to a company level Local Content contribution of 11.2bn SAR out of total relevant costs of 21bn SAR, which represented a contribution to Saudi national GDP of 19bn SAR. We estimate that this will create over 25,000 jobs for Saudi nationals in the mining industry supply chain.

Looking to the future, Ma’aden is working with investors to localize the production of some of the key goods and services that Ma’aden uses to operate and develop new businesses and industries using the products we produce. We signed seven new agreements covering key commodities such as calcined petroleum coke, catalysts and aluminium fluoride that will collectively create an estimated 300 new jobs for Saudi nationals and contribute an additional 1.45bn SAR to Saudi national GDP in future years. We also have a promising pipeline of opportunities we are working on with investors that have the potential to generate a further 1,400 Saudi jobs and a GDP contribution of 1.2bn SAR.

### LOCAL CONTENT ECOSYSTEM

Local Content is a national priority for Saudi Arabia closely aligned with Vision 2030 and has a complex ecosystem of stakeholders. We work closely with the Local Content and Government Procurement Authority (LCGPA), the government body established to drive Local Content growth and innovation across the public and private sector. We are also a founding member and key contributor to the national Local Content Council, which brings together government bodies and the leading private companies in the Kingdom to drive the national Local Content agenda, to align approaches and share best practice across Local

Content programs and to collaborate on national opportunities for Local Content growth.

Additionally, we work alongside many other stakeholders both inside the Kingdom and overseas to drive opportunities in Ma’aden’s Local Content program and contribute to and support national programs and initiatives. Examples include SIDF, the Royal Commission for Jubail and Yanbu, Chambers of Commerce, PIF and The Ministry of Industry and Mineral Resources. In 2021, we conducted briefings and updates with many of these stakeholders. Examples include a successful meeting with members of the Eastern Province Chamber of Commerce and a virtual briefing for investors brought together by the UK Government’s Department for International Trade.

### LOCAL CONTENT IN PROCUREMENT

Procurement, the point at which Ma’aden makes decisions on which supplier to select to provide the goods and services it needs to operate, is a key lever to drive Local Content improvements. Ma’aden has worked to embed Local Content at every stage of the procurement process. For example, local bidders, and particularly those that can demonstrate high levels of Local Content, are prioritized for inclusion in bidder lists. Bid documents highlight targets for key Local Content metrics and bid responses must include the bidders’ commitments to meet or exceed those targets. All major tenders include Local Content in the evaluation of bid responses, which becomes a factor in the decision to award the contract. After contract award, Ma’aden works with the selected supplier to ensure that the Local Content commitments agreed during the tender are delivered and works together to develop and deliver plans to improve Local Content over time.

## LOCAL CONTENT



**72%**

of 2021 total spend on goods and services was placed with KSA registered companies



**56%**

of 2021 total spend on physical goods were placed with local manufacturers



**100%**

of new suppliers in 2021 were screened using social criteria



**ZERO**

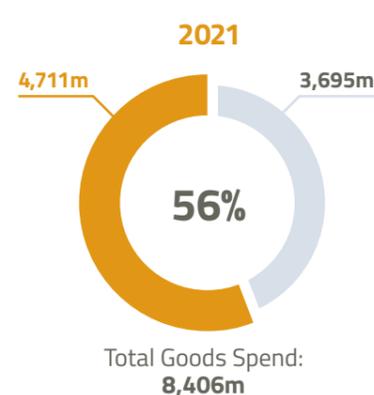
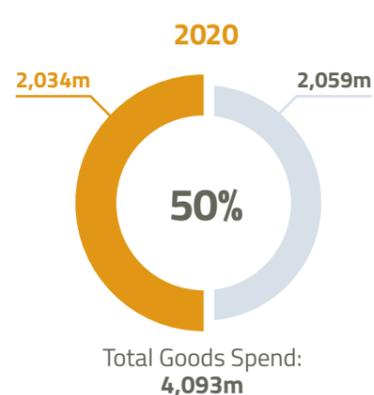
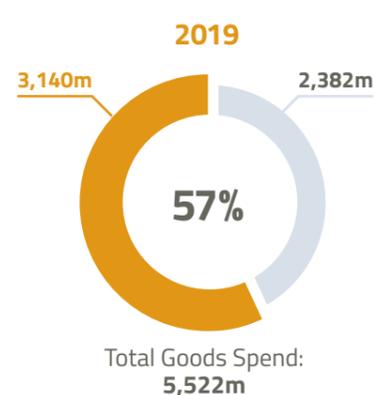
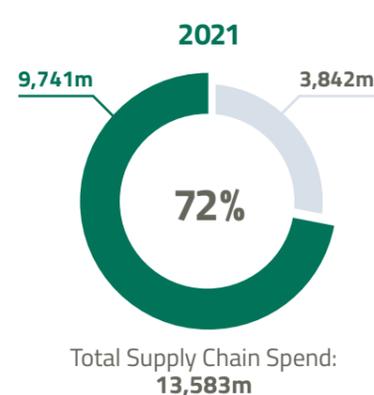
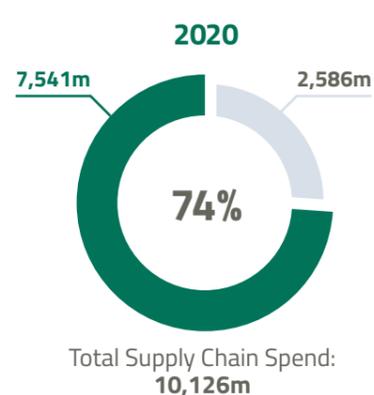
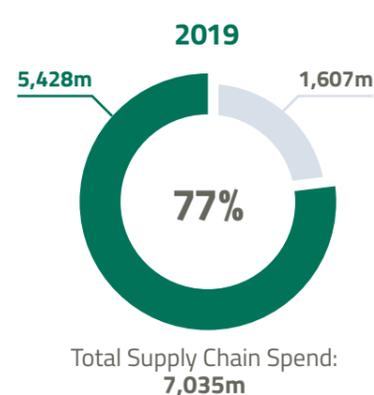
suppliers were found to have actual or potential negative social impacts

### SUPPLY CHAIN INVESTMENT OPPORTUNITIES

In 2021, Ma'aden spent 13.6bn SAR (excluding banks) on goods and services to support our operations. A key element of our Local Content program is to drive the localization of the production and delivery of these goods and services and increase the Local Content contribution of the businesses that provide them to Ma'aden. In 2020, 99

categories of significant spend were identified as potential opportunities to increase Local Content, and in 2021 this list was further reviewed and consolidated into 82 opportunities, including goods and services purchased from businesses based in the Kingdom and overseas. In both cases, we believe there is an opportunity for the level of Local Content to be increased in production and delivery.

### ON-SHORE SPEND (2019 – 2021)



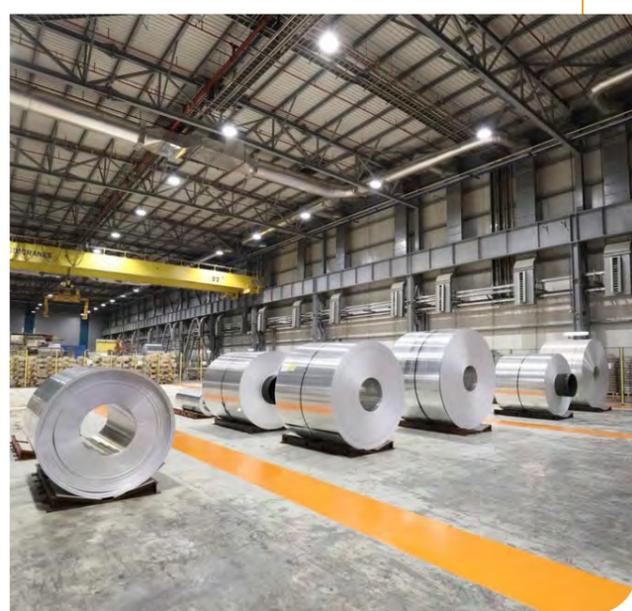
## LOCAL CONTENT

### SUPPLY CHAIN LOCAL CONTENT OPPORTUNITY CATEGORIES

Raw Materials	Equipment & Spare Parts	Services
Aluminium Scrap	Power Transmission	Mining Operation
Petroleum Coke	Electrical & Instrumentation	Ocean Freight
Pitch	Pipes & Fittings	Manpower Supply
Fatty Acid	Building & Construction Machinery	Tanker Truck Transport
Explosives	Geerators Rental	Freight Forwarding
Defoamer	Valves	General Maintenance
Magnesium	Pumps	Scaffold Services
Sodium Cyanide	Compressors Rental & Maintenance	Transport from Mines
Aluminium Fluoride	Safety Suppliers - PPE	Facilities Management
Coating Oil	Heavy Equipment Spares	Drilling Services
Alloys	Hardware & Fasteners	Management Consultancy
Colouring Agent for DAP	Filtration	Conveyor Maintenance
Limestone & Hydrated Lime	Hydraulics	Gypsum Stacking
Metal Products	Fabricated Structural Assemblies	Catering Services
Potash	Bearing	Waste Management
Manganese Based Alloys	Seals	Mobile Equipment
Antiscalants	Lubricant	Chartered Bus Service
Catalysts	Gaskets	Professional Engineering
Flocculants	Paints & Primers	Refractory Services
Caustic Soda	Conveyors	Educaction & Training
Refractory Bricks	Hose	Security Management & Fire Safety
Aluminium Coating	Tube	IT Consultancy
	Flange	Hydro Jetting Services
	Computer Equipment & Accessories	Catalyst Loading
	Washers	Event Management
	Motor	Laboratory Services
	Crushes, Breakers & Grinders	Manufacturing Services
	Tires & Tire tubes	
	Nozzles	
	Switches	
	Straps	
	Cathode sealing bar	
	Dewatering equipment	

# LOCAL CONTENT

## 2030 SUPPLY CHAIN OPPORTUNITIES



Investors interested in working on these opportunities are invited to contact Ma'aden and register with our Local Content program. Once registered, investors work with Ma'aden through a structured process to advance the project. In turn, Ma'aden provides support to investors as they progress the opportunity through detailed feasibility studies into implementation and commissioning. This support can take several forms, from providing information

on demand and specifications through technical support and advice, to introductions to other parties that can help the investors in areas such as financing and infrastructure. We are actively working on opportunities covering 21 categories which have the cumulative potential to increase Local Content by 440m SAR, deliver an additional 1.2bn SAR annually to the national GDP and create over 580 new jobs.

# LOCAL CONTENT

## SUPPLY CHAIN LOCAL CONTENT SUCCESS STORIES – RAW MATERIALS

In 2021, Ma'aden worked with several local suppliers of aluminium scrap to localize the supply of **aluminium scrap** to nearby Ma'aden aluminium smelter operations. All the suppliers have been qualified and their materials tested through a trial order process. 22% of supply was localized in 2021, with plans to raise this to 40% by 2025. Aluminium scrap is one of Ma'aden's largest single categories of spend and achieving the 40% target will see more than 250m SAR spend localized, representing an annual additional contribution to the KSA economy of over 400m SAR of additional GDP. Meeting this target also has the potential to create an estimated additional 150 jobs for Saudi nationals.

Ma'aden has also signed a supply agreement with a local investor for the supply of **calcined petroleum coke (CPC)** for use in its aluminum smelter in Ras Al Khair. Under the five-year contract, with an annual value of \$40m, Ma'aden will receive an annual supply of 100,000 metric tonnes of CPC, one of the largest and most critical raw materials required to support aluminium smelting activities. Historically this commodity has been entirely sourced from outside the Kingdom, so the contract represents a major step forward in the localization of the industry supply chain. Production of CPC and supply to Ma'aden is scheduled to begin before the end of 2024 and is estimated to add over 250m SAR yearly to the KSA economy.

## SUPPLY CHAIN LOCAL CONTENT SUCCESS STORY – SERVICES

Ma'aden is working with local investor Modern Chemicals, who has partnered with overseas investor MSALabs, to collectively investigate the opportunity to develop a geochemical analytical services laboratory in the Kingdom of Saudi Arabia, that could offer laboratory analytical services to Ma'aden, as well as other mining investors and exploration companies. This would significantly increase the laboratory services capability and capacity in the KSA. MSALabs has strong global experience in the development of such facilities and in working with Modern Chemicals they have consulted with other stakeholders in the

Kingdom including the ministry, the Saudi Authority for Industrial Cities and Technology Zones (MODON) and the Saudi Investment Development Fund (SIDF) to further develop the opportunity. Ma'aden signed a three-way non-binding Memorandum of Understanding with Modern Chemicals and MSALabs in August 2021 to fully investigate and plan the opportunity. We estimate a potential positive impact on GDP in KSA of up to 10m SAR yearly, as well as the potential to bring new technologies and capability to the Kingdom. The new facility could be operating as soon as the end of 2022.



# LOCAL CONTENT

## DOWNSTREAM INVESTMENT OPPORTUNITIES

In 2022, we will also increase our focus on Downstream Local Content opportunities. These are opportunities to build new businesses and create new jobs in KSA based on the outputs of Ma'aden's production. While much of Ma'aden's production brings valuable export revenues to the Kingdom, our products also offer the opportunity for

investors to create value-adding manufacturing businesses, and in some cases even new industries, in the Kingdom, developing new capabilities and capacity. We have identified 36 priority Downstream investment opportunities across our aluminium, phosphate and industrial minerals business an increase from the 25 priority opportunities identified in 2020.

DOWNSTREAM LOCAL CONTENT OPPORTUNITIES		
Aluminium	Phosphate	Industrial Minerals
Aluminium Foil	Aluminium Fluoride	Calcined Bauxite
Aluminium Powder	Sulfuric Acid	Ceramic Proppant
Aluminium Composite Panels	Technical Grade Ammonium Nitrate	Magnesia Carbon Bricks
Aluminium Extrusions	Ammonium Sulfate	Metakaolin
Aluminium Forgings	Dicalcium Phosphate	Basic Monolithic Refractories
Aluminium Cables & Welding Wires	Phosphorus Trichloride	Brown Sintered Alumina
Aluminium Slugs/Circle	Fertilizer Grade Ammonium Nitrate	
Aluminium Wheels & Castings	Monocalcium Phosphate (Mcp)	
Aluminium Caps & Closures	Silicon Dioxide	
Aluminium Conductors	Crystalline Map	
Aluminium Sulphate	Monopotassium Phosphate (Mkp)	
Aluminium Tubes/Pipes	Sodium Fluorosilicate	
Poly-Aluminium Chloride (PAC)	Low-Carbon Cement Clinker	
Aluminium Alloy Drill Pipe	Monosodium Phosphate (Msp)	
Aluminium Blinds and Shades		
Aluminium Notch Bars		

# LOCAL CONTENT

## 2030 DOWNSTREAM OPPORTUNITIES



Like opportunities in our supply chain, investors are similarly encouraged to contact Ma'aden to discuss downstream opportunities. Again, a structured program exists to register investors, and support is provided to progress the opportunity from feasibility study to securing financing, implementation and, ultimately, commissioning and production. To help investors in the early stages of investigating opportunities, Ma'aden has developed a study that provides details on the application and demand, alongside estimates for the required investment, land

requirement and potential returns for each opportunity. We currently have investors registered for and actively working on opportunities covering eight downstream categories, and cumulatively these eight opportunities have the potential to increase Local Content by 1.3bn SAR, deliver an additional 4.3bn annually to the national GDP and create over 3,000 new jobs.

## DOWNSTREAM LOCAL CONTENT SUCCESS STORY – ALUMINIUM

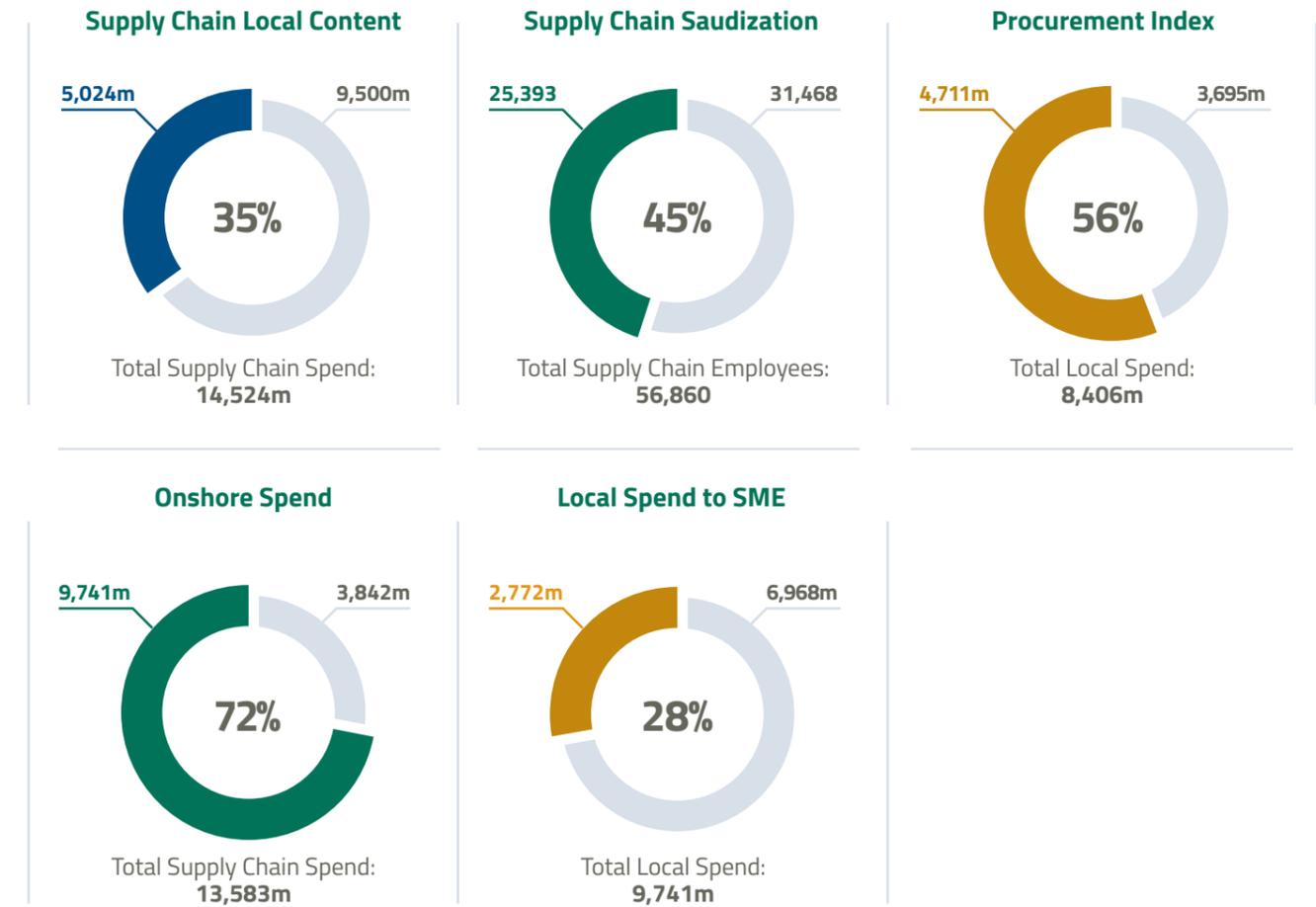
Ma'aden is currently working with a local investor on the development of a manufacturing facility for the production of **food and pharmaceutical grade aluminium foil** and **aluminium cladding**. This facility, representing an investment in excess of 166m SAR, would be the first of its kind in the GCC and develop a new capability and industry within the Kingdom to supply domestic markets and export across the region. The new facility is estimated

to create 200 new jobs in the Kingdom, 30% of which are initially planned to be Saudi nationals, later rising to 50%. Detailed design and feasibility studies for the new facility are complete, and Ma'aden and the local investor signed a memorandum of understanding to develop the opportunity in August 2021. Production is forecast to begin in January 2023.





THE YEAR IN NUMBERS



CONTRACTOR WORKFORCE

A key focus for Ma'aden is to work with our contractors and major service providers to provide attractive, sustainable jobs for Saudi nationals and boost the domestic skill base and capability in the mining industry.

In 2021 we worked with all of our largest and most significant on-site contractors and service providers to better understand the roles in our extended workforce the current levels of Saudization and identify the roles and opportunities we could target to convert from expat to national jobs. This study identified a series of initiatives working with contractors, service providers, government agencies and training providers to help create new opportunities and jobs for Saudi nationals that are attractive and will provide them with long-term opportunities for growth and development in the mining industry. We will be working on these initiatives throughout 2022 to boost levels of Saudization across our supply chain and achieve the following broader objectives:

1. Establish clear Saudization targets across our supply chain
2. Increase visibility of jobs in our supply chain
3. Reduce turnover of Saudi Nationals in our contractor workforce
4. Increase the capacity and capability of mining-specific talent supply in the national and regional workforce
5. Provide sustainable job opportunities offering career and skill development for Saudi Nationals
6. Increase the desirability of jobs in our supply chain, particularly those in remote regions
7. Convert project roles on major capital projects into longer term operational roles for Saudi nationals





**LEADERSHIP, GOVERNANCE & STEWARDSHIP**

At Ma’aden, the EHSS Governance process and structure is embedded and practiced from the leadership level down, demonstrating leadership’s commitment to steward EHSS throughout the organization. This includes committees and meetings at the full Board, Safety and Sustainability Board, Executive EHSS Council, EHSS Council and Affiliate EHSS Committee levels.

- At the Board level, in the Safety & Sustainability Board Committee, there is stringent oversight of the company’s EHSS strategy to enable delivering the desired performance outcome.
- On a strategic level, the Ma’aden Executive Safety Council assesses EHSS and risks, ensuring that the systems and processes that make up the strategy are enabled within the organization.
- The EHSS Council and Affiliate EHSS Teams make up the tactical level, working together to further develop the systems and processes that will deliver performance improvements under the risk-based approach to EHSS.

**EHSS MANAGEMENT SYSTEM (MSHEM)**

Through an organizational-wide collaborative effort, the development of an Integrated EHSS Management system (MSHEM) was completed in 2020 a significant milestone in the Ma’aden EHSS journey. MSHEM covers 100% of employees and contractors and is comprised of a set of risk-based, integrated and interlinked policy and EHSS framework documents made up of elements and sub-elements that define the requirements to effectively manage EHSS risks at our facilities. These standards meet the international and national best EHSS standards and practices.

85 MSHEM standards (15 elements & 70 sub-elements) to cover all of Ma’aden have been finalized and approved. In 2021, the system was formally launched by our CEO for full implementation across Ma’aden and MSHEM workshops were conducted for all the affiliates. The implementation of the MSHEM standards will break the silos between Ma’aden Affiliates and help to achieve the following across all Ma’aden operations:

**20+** HEALTH AWARENESS CAMPAIGNS LAUNCHED IN 2021

- Consistency in EHSS compliance & methodology.
- Consistency in EHSS language – Standardization of definition, scope, requirements and verification process
- Sustainable EHSS performance

Further, a Ma’aden Assurance Program for the MSHEM standards was implemented to ensure risks are appropriately identified and mitigation measures to continue operations with identified risks are implemented and approved. The first cycle of MSHEM audit was conducted by audit teams led by Director-level employees of each affiliate with members from operations and maintenance of the Affiliates and Corporate EHSS.

**2021 MAJOR EHSS ACTIVITIES**

Despite the challenges faced in 2021 due to the continued prevalence of the COVID-19 pandemic, Ma’aden made great achievements in health and occupational safety at many operational sites. One of the most important activities conducted in 2021 was a health and wellbeing initiative to protect employees from unknown medical conditions which may jeopardize their health and safety in the workplace. The program included health calendars and campaigns to increase employee awareness. More than **20** of these health awareness campaigns were conducted in Ma’aden Aluminium, MWSPC, MGBM, IMC and Corporate HQ, most notably around **anti-obesity, world diabetes day, stress awareness month, cold and heat stress, global hand washing day and safety at home awareness**. Additionally, 5 blood donation campaigns were conducted by Ma’aden Aluminium, MWSPC, MPC and Corporate HQ in collaboration with regional blood donation banks, where approximately **300** employees from different Ma’aden sites donated.

COVID-19 2nd dose vaccination campaigns were also conducted at many Ma’aden sites, and Ma’aden vaccinated approximately 25,000 employees, contractors, service workers and others entering our premises, achieving a 100% employee vaccination rate earlier than the target date from the government. Additionally, many sites continued to engage community stakeholders and used social investments to build community resiliency through donating equipment, creating awareness and supporting infrastructure development.

# HEALTH, SAFETY & SECURITY

Another milestone achieved in 2021 was launching a Corporate HQ clinic for medical examinations and consultations, which led to more than 90% of HQ employees receiving annual medical checkups. Also, a qualitative and quantitative health hazards assessment was conducted for Ma'den Aluminium, MWSPC and MPC, and a noticeable improvement was achieved across Ma'den sites in the occupational industrial hygiene program. Overall, 6,887 out of a target 6,869 health risk assessments were conducted (including employees and contractors), 1,376 out of a target 1,370 workplace noise monitoring assessments were conducted, 76 out of a target 76 heavy metal monitoring assessments were conducted and 976 out of a target 976 workplace radiation monitoring assessments were all successfully conducted. These targets are aggregations from all affiliates, following the MSHEM requirement for random assessments.

As a result of leadership's focus and commitment on all levels of employees, Key Performance Indicators for EHSS performance are continuously improving. The challenge is to sustain such improvements and maintain the same high level of leadership and system effectiveness and continually identify and mitigate EHSS risks. To this end, we established the SHER (EHSS Rate) & PSER (Process Safety Event Rate) as our main KPIs to focus on all EHSS and Process Safety incidents collectively. Also, visibility on regulatory

## EHSS PERFORMANCE AT A GLANCE



**100%**  
of employees and contractors are covered by an occupational health and safety management system which has been both internally audited and audited by an external party



**ZERO**  
incidents of non-compliance with health and safety regulations resulting in a fine or penalty

	2017	2018	2019	2020	2021
Lost Time Injury (LTI) Rate	0.05	0.20	0.14	0.07	0.09 (Employees) 0.07 (Contractors)
Health and Safety Injury (HSE) Rate	0.69	0.30	0.37	0.22	0.18 (Employees) 0.20 (Contractors)
Total Number of Fatalities	2	2	0	3	1 (Contractor)

Note: 2017-2020 metrics include both employees and contractors. All are based on 200,000 hours worked.

compliance issues such as notice of violations, penalties, EPO (Environmental Permit to Operate) validity, underground water results and remediation plans, as well as other environmental KPIs, was enhanced within the organization to improve focus on these leading KPIs. Furthermore, KPIs for asset integrity were established and stewarded at all levels including the Safety & Sustainability Board level.

Work-related injuries were tracked across a multitude of specific metrics. In 2021 there were no occurrences of high-consequence work-related injuries (where a worker was unable to recover within 6 months) among either employees or contractors. There was a single instance of a contractor fatality and a small number of lesser lost-time injury and HSE incidents. The main types of work-related injuries for both employees and contractors were injuries to the hands and fingers. Throughout the year the main type of work related health incidents were MTIs related to heat stress. All incidents were reviewed, and Ma'den is continually working to improve and reach the ultimate goal of zero injuries or work-related ill health of any kind.

# HEALTH, SAFETY & SECURITY

YEAR-OVER-YEAR PERFORMANCE			
	2019	2020	2021
SHER	1.43	1.41	1.04
AIFR	0.37	0.22	0.20

**SHER (EHSS Rate):** The number of all EHSS Incidents, as a function of severity, per every 200,000 hours worked:

$$\frac{(5 \times \text{Class A} + 5 \times \text{Class B} + \text{Class C}) \times 200000}{\text{Hours worked (Direct Hire + Contractor employees)}}$$

**AIFR:** Total Recordable Incident Rate. Formula established by OSHA –

$$\frac{\text{Number of Recordable injuries} \times 200000}{\text{Manhours worked}}$$

2021 RECORDABLE INJURIES			
	MA'ADEN Employees	Contractors	Total
Fatalities (FAT)	0	1	1
Lost Time Injury (LTI)	6	12	18
Restricted Duty Injury (RDI)	2	6	8
Medical Treatment Injury (MTI)	4	18	22
<b>TOTAL HSE Incidents (Reportable)</b>	<b>12</b>	<b>37</b>	<b>49</b>
<b>TOTAL Hours Worked</b>	<b>13,085,459</b>	<b>2,306,000*</b>	<b>15,391,459</b>

\*Approximate

ENVIRONMENTAL PERFORMANCE			
	2019	2020	2021
Notice of Environmental Violations	12	26	1
Environmental Penalties	2	0	1

## EHSS COMMUNITY ENGAGEMENT:

EHSS Centers of Excellence (CoEs) have been established that comprise of Subject Matter Experts (SMEs) from Affiliates and EHSS Corporate expertise, to work as an EHSS community team on the following key focus areas:

- Process Safety Center of Excellence
- Environment Center of Excellence
- Security Center of Excellence
- Occupational Safety Center of Excellence
- Health & Hygiene Center of Excellence
- Emergency Response & Crisis Management Center of Excellence
- EHSS Awareness Center of Excellence
- EHSS Performance Analysis Center of Excellence



## EMPLOYEE WELLNESS (DIVERSITY, EQUITY & INCLUSION)

Ma'aden's policies on employee wellness and diversity, equality and inclusion are designed to make everyone feel welcome and respected regardless of race, nationality, religion, gender, disability, ancestry, social origin and political or other opinions. We recognize the opportunity to improve business performance by drawing on the talent, distinct experiences, viewpoints and ideas of a diverse and inclusive workforce and remain particularly aware of this while increasing Saudi recruitment in accordance with Vision 2030.

In 2021, we continued to advance our ongoing Female Employment Plan to improve recruitment, training and

development of local female employees. Since the first woman joined Ma'aden in 2019, we have now increased our number of female employees to 98 and will continue to grow this number. Pay grades for male and female employees are equal in all areas. Related to employee development, training hours per employee were increased in 2021 from 2020 for not just women, but also for men and expat employees. We continue to recognize the need to screen new Ma'aden suppliers for potential negative DEI issues, which we intend to incorporate into our supplier assessment processes in the future.

### EMPLOYEE WELLNESS PERFORMANCE AT A GLANCE



**NEW FEMALE EMPLOYMENT GOALS:** Increase female employment to 6% of all FTEs by 2030 and 15% of all FTEs by 2040 (from 2020 baseline of 1%)



**131** female employees in 2021, continuing a three-year trend growing the number of women at Ma'aden

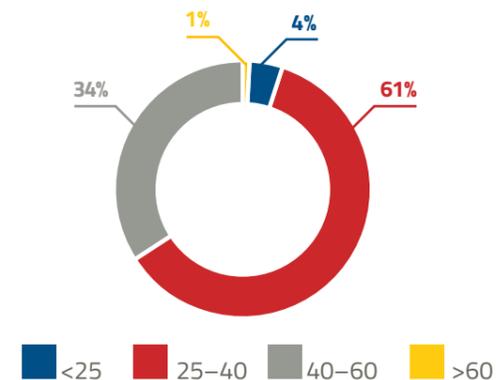


**5.72%** overall employee turnover rate



**100%** of employees received formal performance and career development appraisals

### FULL TIME EMPLOYEE BREAKDOWN BY AGE GROUP



## COMMUNITY RELATIONSHIPS & HUMAN RIGHTS

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 (community acceptance and approval).

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, setting up 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.

### POTENTIAL TO MAXIMISE CONTRIBUTIONS TO VISION 2030 THROUGH STRATEGIC SOCIAL INVESTMENT & LOCAL CONTENT



- Ma'aden's greatest contribution to host community development – aligned to Vision 2030 – is through **maximizing local content** (and in some cases shared infrastructure such as roads or water)
- This will be supported by wider **skills development** and local **business development**.
- Strategic social investment** can help underpin and complement this contribution.



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, setting up 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.

### Formal training hours per employee INCREASED ACROSS ALL CATEGORIES

CATEGORY	HOURS	EMPLOYEES	AVERAGE
MEN	136,959	2,060	66
WOMEN	3438	57*	60
<b>TOTAL</b>	<b>140,397</b>	<b>2,117</b>	<b>66</b>

\* Only 57 female employees were scheduled for training and Individual Development Plans (IDP) in 2021.

CATEGORY	HOURS	EMPLOYEES	AVERAGE
LOCAL	124,757	1,807	69
EXPAT	15,640	310	50
<b>TOTAL</b>	<b>140,397</b>	<b>2,117</b>	<b>66</b>

**2** reported incidents of discrimination and **12** grievances about labor practices filed, all of which were resolved through formal grievance mechanisms

2021 EMPLOYEE BREAKDOWN BY GENDER	#	%
Full Time Employees - Men	5,777	97.8%
Full Time Employees - Women	131	2.2%
Local Nationals - Men	4,223	71.5%
Local Nationals - Women	131	2.2%
Managers & Directors - Men	289	99.3%
Management Positions - Women	2	0.7%
2021 CONTRACTOR BREAKDOWN BY GENDER	#	%
Global Contractor Personnel - Men	1153	100%
Global Contractor Personnel - Women	0	0%



**25M SAR** spent on Community and Social Investment in 2021



**25** active Community and Social Investment initiatives in 2021



**100%** of employees from 2017 through 2021 were trained in human rights policies or procedures concerning aspects of human rights relevant to operations



**100%** of security personnel received training on human rights



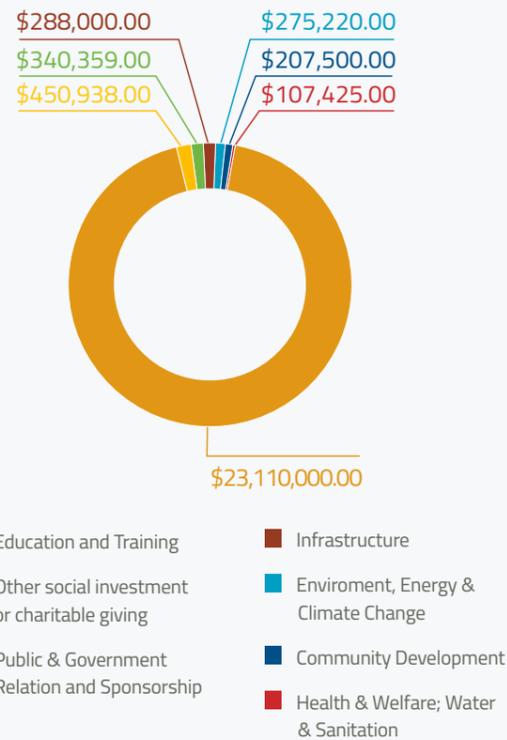
**100%** of significant investment agreements and contracts included human rights clauses or underwent human rights screening



**ZERO** incidents of violations involving rights of indigenous peoples

# COMMUNITY RELATIONSHIPS & HUMAN RIGHTS

## 2021 COMMUNITY INVESTMENT



Our Community Management System (CMS) is critical for providing community members with the opportunity and ability to interact directly and share concerns with Ma'aden. Utilizing this system has revealed a number of factors critical to developing and maintaining a positive relationship between local communities and Ma'aden:

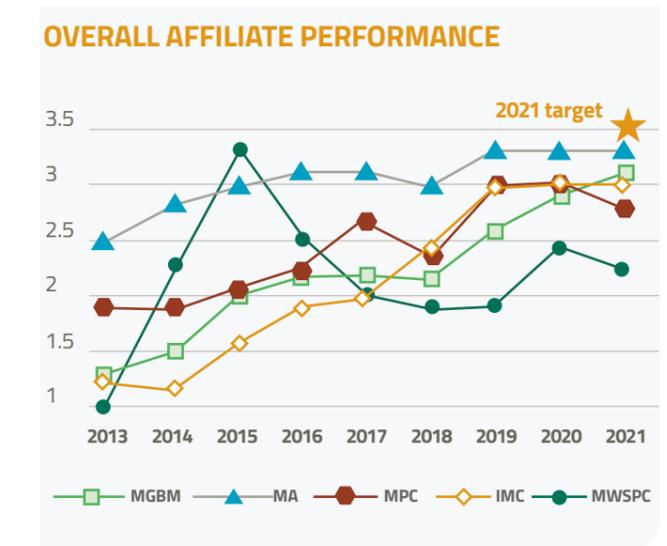
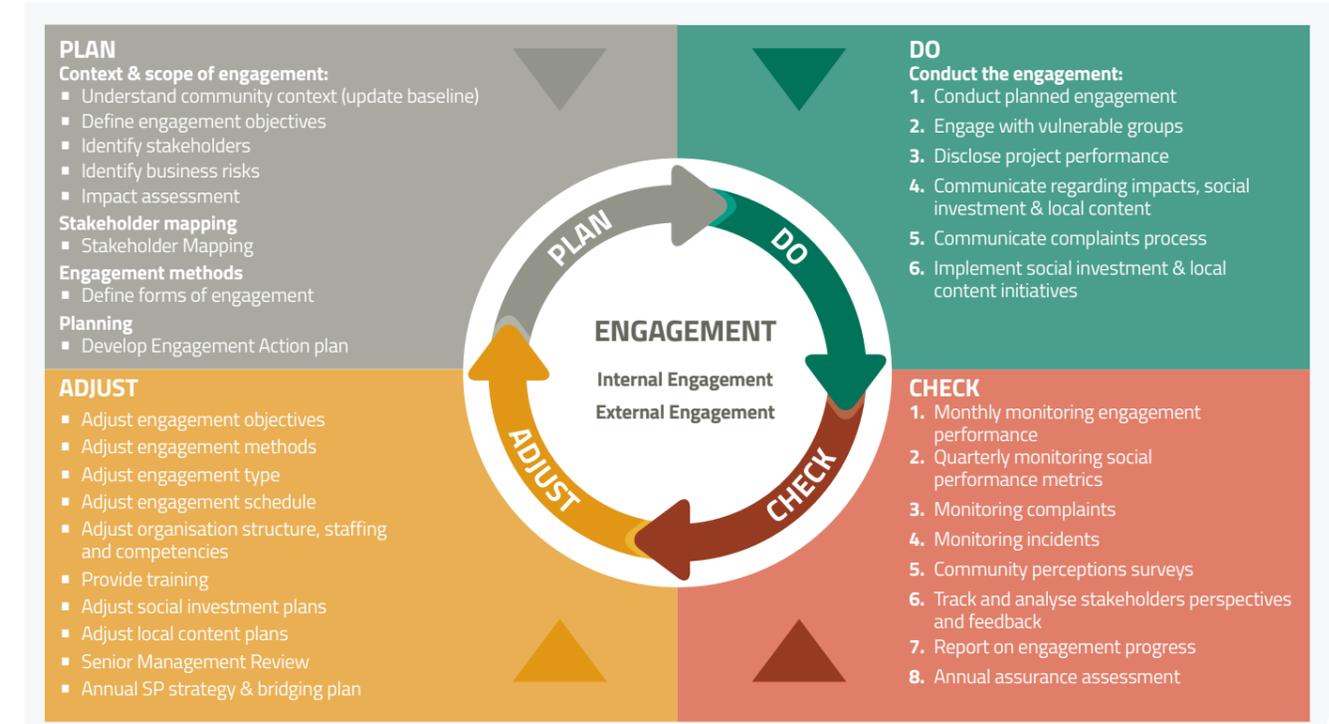
In 2021 there were no major negative impacts to host communities, and proactive steps were taken to eliminate to the extent possible any minor negative impacts common to the mining industry, such as dust generation, noise pollution and increased vehicular traffic around operational sites. For example, water was put on mine roads to minimize dust generation.

Ma'aden social leaders continued to engage with community officials to find avenues to mitigate the effects of these minor issues on local communities to every extent practical and possible. Ma'aden's overall "Social Performance Score" for 2021 improved from a 2.94 (out of 5) to a 2.97, short of the 3.5 target for the year.

Utilizing this system has revealed a number of factors critical to developing and maintaining a positive relationship between local communities and Ma'aden:

- Clear Information
- Fulfill Promises
- Fair Opportunities
- Stakeholder Consideration
- Local Content Development
- Ease of Interaction with Ma'aden

# COMMUNITY RELATIONSHIPS & HUMAN RIGHTS



Overall affiliate performance, which had the same 3.5 target, varied with some nearly reaching the 3.5 score goal while others lagged. Affiliates that dipped in performance were found to have had unstable resources and changes in leadership, making the smooth continuation of some programs challenging. COVID-19 also limited the amount of community surveys and face-to-face engagement possible. Increased Community Engagement, Local Content and Social Investment staff capacity and commitment from senior leadership is driving better performance and will continue to drive towards the 3.5 score target. While Social Investment is maturing across all sites by better involving

stakeholders in decisions and addressing pressing needs, engagement can further improve through better complaint management and disclosure. Local Content still focuses more on short-term programs though adapting to take advantage of opportunities with longer-term benefits will lead to improvement. Most sites have now diligently implemented ESG systems with good results, and ESG representatives across sites are notably growing in breadth of understanding and experience.



Mahad Cultural Center

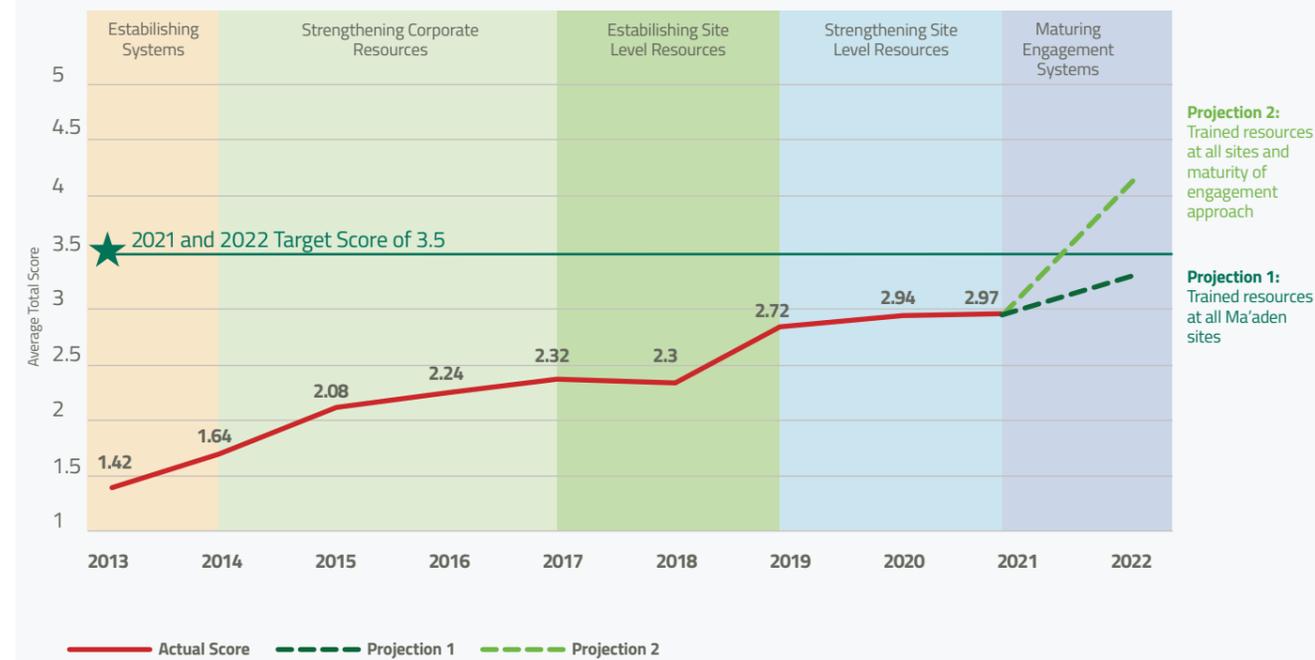


## FUTURE ACTIONS

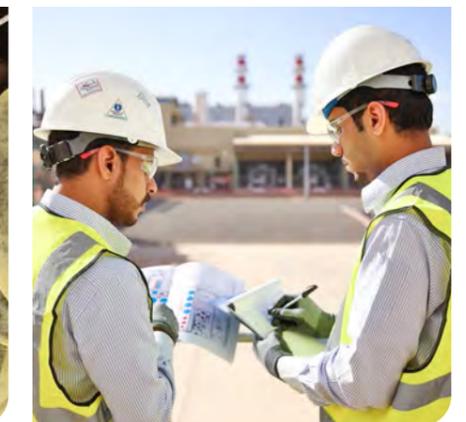
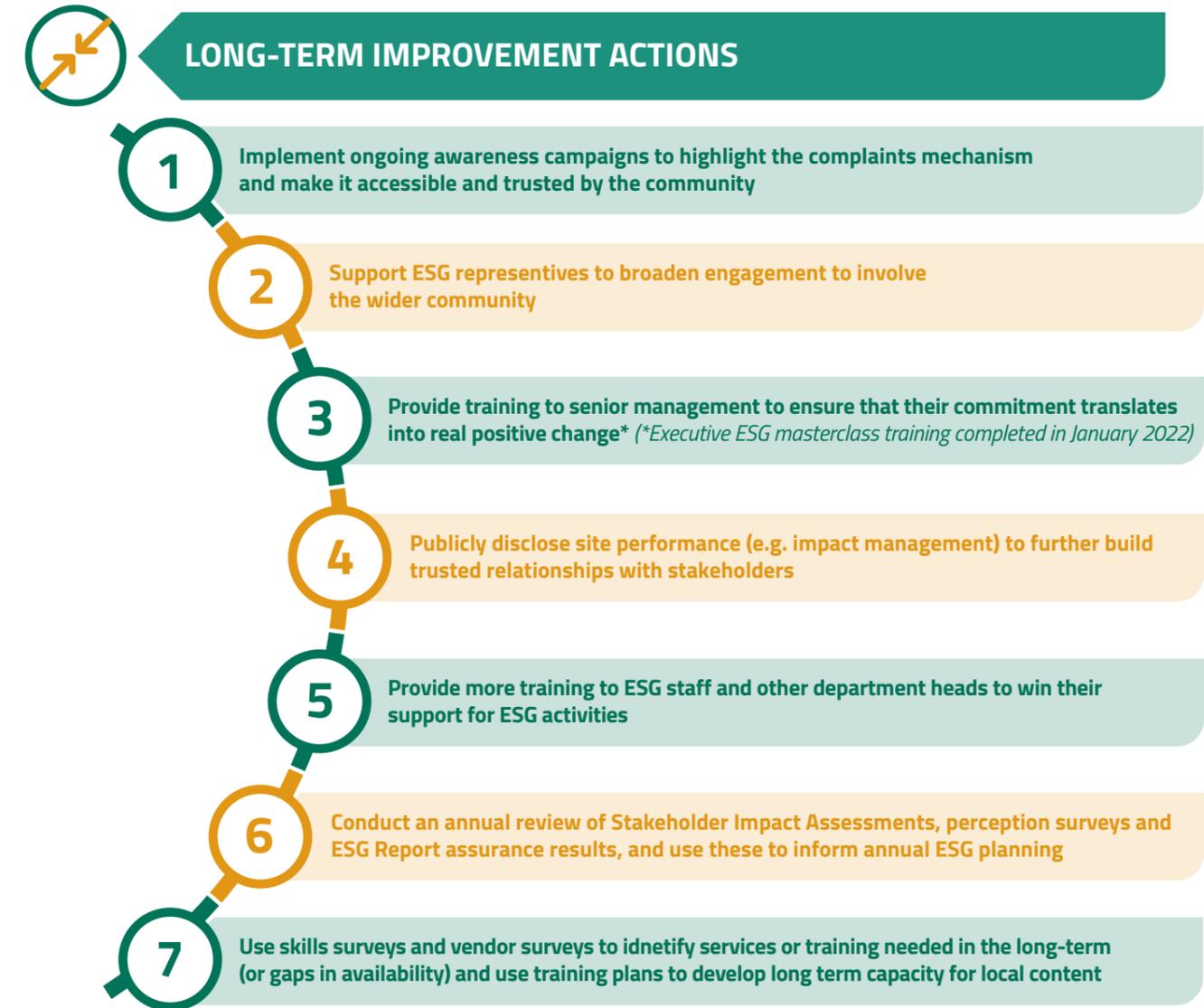


The 2022 target remains at 3.5, and the 2030 and beyond target is to achieve and remain at or above a score of 4.

### KEY ACTIONS TO IMPROVE PERFORMANCE IN 2022



- Increase monitoring and evaluation of community investment to understand true impact and effectiveness
- Foster wider community participation in decision making
- Ensure the use of trusted partners by assessing their capacity
- Publicly report on outcomes and effectiveness rather than just spend
- Use this information to improve future investments and build Ma'aden's social brand





Top Right: The Northern Borders Region of Saudi Arabia outlined in red (Imagery 2022 TerraMetrics, Map data 2022 Google).

Lower Left: A model of what the Wa'ad Al Shamal Minerals Industrial City will be when completed in 2042, incorporating seven world-class plants and associated facilities, including phosphate mining operations, fertilizer production, power and downstream plants, water pipelines, a residential city and transportation access. These plants make the Industrial City one of the largest phosphate production complexes in the world.

SUCCESS STORY: THE MA'ADEN SCHOOLS OF EXCELLENCE PROGRAM (2017-2022)

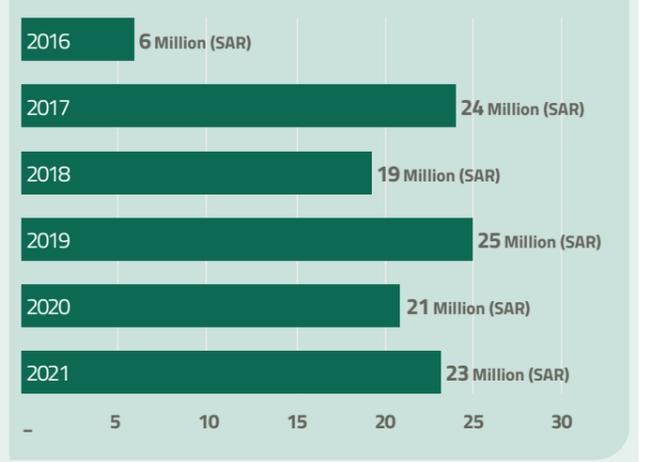
Throughout 2021 Ma'aden continued support of its ongoing Schools of Excellence program which was started in 2017 through a partnership between Ma'aden Wa'ad Al-Shamal Phosphate Company (MWSPC) and the Ministry of Education. The aim of the program is to provide the highest-quality education to hundreds of students in the Kingdom's Northern Borders Region (NBR), which is the least populated region of Saudi Arabia with some of the most limited educational and professional opportunities.

Ma'aden, along with other partners, have been developing the Wa'ad Al Shamal Minerals Industrial City in the Northern Borders Region, where MWSPC operates the phosphate industrial complex at the heart of the development, through a project conceived as part of a national plan to economically develop the deprived region. Wa'ad Al Shamal means "Northern Promise," and as the Kingdom's Vision 2030 projects mining as a key sector for the further diversification and development of the Saudi economy, the building and operation of this state-of-the-art infrastructure will help to tap the mineral wealth of the region and deliver a wide range of benefits to the people living in this remote area including a multitude of new jobs and business opportunities. When completed in 2042, it is estimated that the Industrial City will generate 24 billion SAR from non-oil sectors, contribute 3% to the Kingdom's GDP and create 30,000 high-quality jobs for qualified Saudi youth, especially those local to the region.

To further aid in the facilitation of job creation for the region, Ma'aden took to heart its role in also advancing educational opportunities for local youth through the Schools of Excellence program. This 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. Since inception, the

program has established itself as the premier provider of the highest-quality high school education in the Northern Borders Region, and one school has been ranked the 7th best high-school in all of the Kingdom.

SCHOOLS OF EXCELLENCE ANNUAL SPEND 2016-2021



While the Ministry of Education provides the school buildings, curricula, policies, standards for achievement and school leaders, MWSPC overlooks the quality of operations and outcomes and funds all additional expenses incurred, including students' tuition fees and upgrades to school facilities including gyms, swimming pools, and STEM (Science, Technology, Engineering, Engineering and Mathematics) labs. Ma'aden has invested 135M SAR into both schools over the past six years, 23M of which were invested in 2021, out of a planned total of 150M SAR by the end of 2022. This represents a tremendous commitment to driving positive impact in Northern Borders communities.



INITIATIVE

Developing, Running & Maintaining two High Schools in ArAr & Turaif



OBJECTIVE

- Provide high standard education
- Create qualified students to join elite universities
- Add value to Northern Border province
- Promote Ma'aden's Brand and values



SPENDING

Total investment of SAR 150M for both schools for 6 years covers:

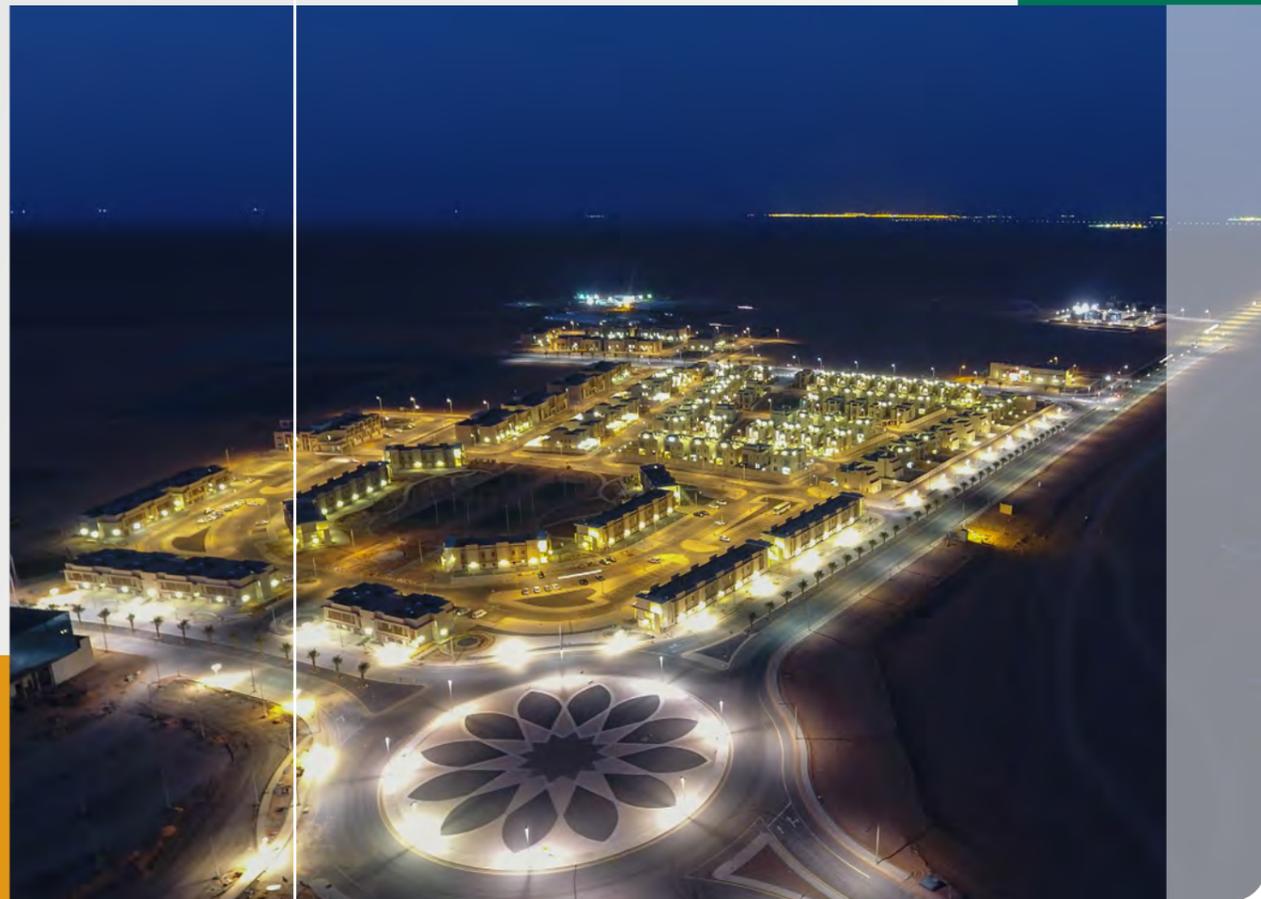
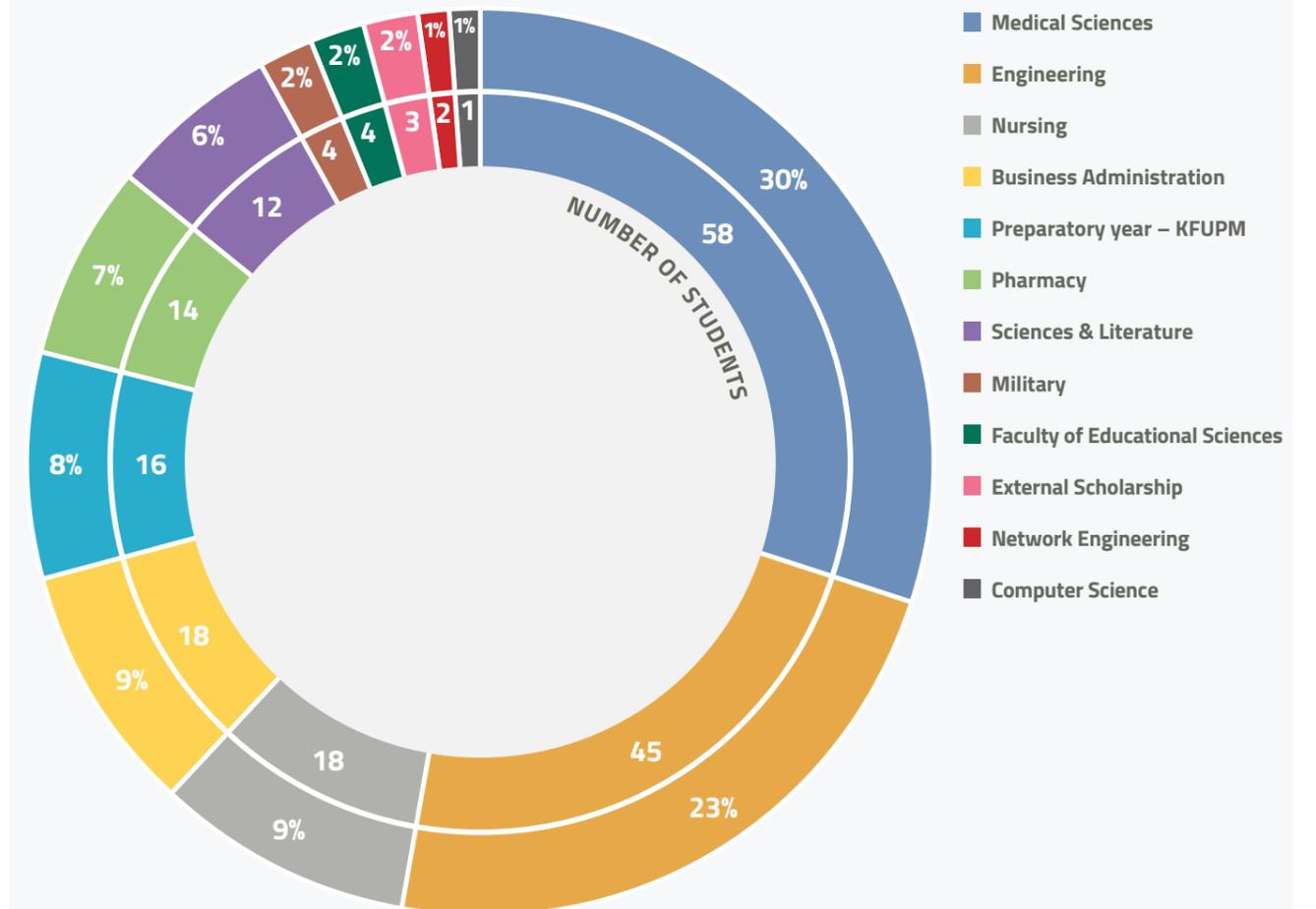
- School Operation Fees
- Maintenance
- Transportation
- Building of Gym
- Revamp

## SUCCESS STORY: THE MA'ADEN SCHOOLS OF EXCELLENCE PROGRAM (2017-2022)

The Schools of Excellence high schools are still in their early years, yet in 2021 the schools supported 691 students, an increase from 650 in 2020, and approximately 100 faculty and staff. Students admitted to the program are offered courses across key STEM subjects including math, sciences and computer skills, as well as Arabic and English language, life skills and safety courses. Upon graduation, students are highly qualified to meet and exceed admission requirements at prestigious universities, such as the King Fahd University of Petroleum and Minerals and other top in-Kingdom and international universities in engineering and science majors.

This is an educational opportunity previously non-existent to Northern Borders youth now available to develop students for decades to come. The program has earned a reputation across the region based on the academic profile and achievements of its students (some of whom have gone on to compete in International Olympiads) and was recognized as the runner up for the 2019 Arabian CSR Award for Excellence. Ma'aden will continue to partner in this impactful initiative, investing in growing the capabilities of local talent in the region and the general education system in the NBR, which will yield amazing exponential results for future generations.

## DISTRIBUTION OF CAREER FIELDS CHOSEN BY GRADUATING STUDENTS IN THE 1st SCHOOLS OF EXCELLENCE COHORT:



The in-development Wa'ad Al Shamal Minerals Industrial City in the Northern Borders Region, at night.



Left & Right: Schools of Excellence STEM high school students in class.

As Ma'aden's operational footprint grows, management remains conscious of the need to improve efficiencies, enhance tracking and reduce energy and carbon emissions to minimize its environmental footprint.

In 2021 Ma'aden completed a transition away from crude oil usage, which was successfully reduced to zero. Overall electricity usage decreased by approximately 2.4% from 2020. Renewable energy sources were not used to any material extent in 2021, and this is a known area for improvement with future initiatives already in progress. While construction at multiple new operational sites is underway to allow for future growth, 2021 production output remained similar to 2020. Production of aluminium decreased by 2%, production of gold decreased by 16% (while tonnes mines increased by 13%), phosphate production across its different types increased by an average of 4% and Industrial Minerals increased by 28%.

Overall, Scope 1 emissions from direct operations increased by approximately 13% while Scope 2 emissions from indirect sources decreased by approximately 11%. More emissions and intensity information can be found in the Appendix on p.48.



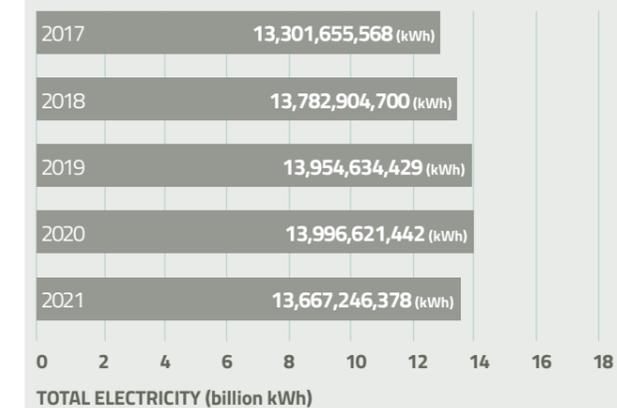
**NEW ENERGY GOAL:**  
Increase renewable energy usage to **10% of energy consumption by 2030** and **20% of energy consumption by 2040**



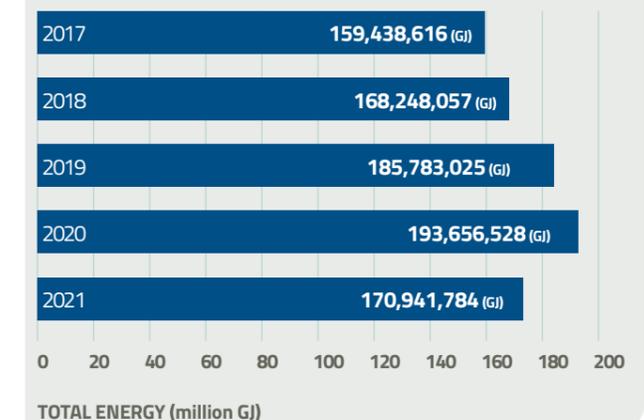
**NEW SUPPLIER ASSESSMENT GOAL:**  
Access 50% of suppliers for environmental impacts by 2030 and 75% by 2040



**ELECTRICITY CONSUMPTION**



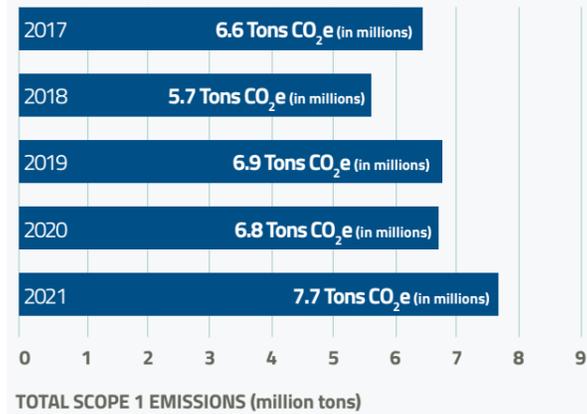
**TOTAL ENERGY CONSUMPTION**



Total Energy Consumption does not include gasoline used in contracted vehicles that are under Ma'aden's operational control, which could not be included in this Report but is planned for inclusion in future reports.

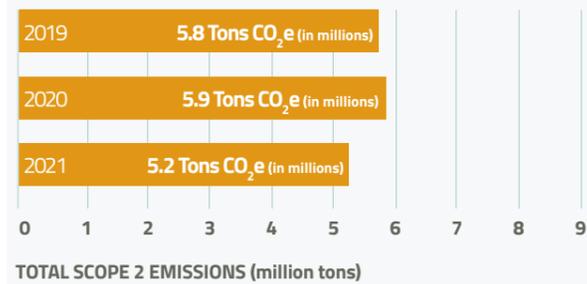
# ENERGY USAGE, GHG EMISSIONS & BIODIVERSITY

## SCOPE 1 EMISSIONS



Total Scope 1 Emissions does not include refrigerants, which could not be included in this Report.

## SCOPE 2 EMISSIONS



The change in Scope 2 emissions from 2020 to 2021 is due in-part to successful emissions reduction efforts by some affiliates and in-part to an emission factor change by Aluminium affiliates (of 0.425 mt CO<sub>2</sub>e/MWh to 0.4) based on the American Petroleum Institute's reference for the technology used by power supplier SWCC.

Ma'aden experienced two incidents of non-compliance with environmental regulations in 2021; one at MGBM which resulted in a 40,000 SAR fine and one at MPC which resulted in a non-monetary sanction for non-compliance. MGBM's incident was due to minor leakages of oil/hydrocarbons reaching the soil, which was cleaned immediately and a new system implemented to prevent minor leakages reaching soil, closing the violation. MPC's incident was due to dumping of phosphate ore powder onto the roadside by the transport contractor, which was immediately cleaned and an inspection area implemented.

- **ONE operational site in a protected area of high biodiversity value**
- **ONE IUCN Red List species with habitats in areas affected by operations**
- **ZERO significant impacts on biodiversity**

To mitigate such risks, all operations go through environmental baseline and impact studies before any construction activities commence, and while operations are ongoing spanning the full life of the operation, from initial exploration, through construction, operation, maintenance, decommission of sites and rehabilitation.

MGBM's Alsouq gold mine (4.79 km<sup>2</sup>) is located within the Saja Umm Ar-Rimth Natural Reserve which is a habitat for the Houbara Bustard (a large terrestrial bird) whose global population is listed as Vulnerable. Both inside and outside the mine, MGBM monitors quarterly for any changes in air quality, noise, emitted gases and water quality, and sends the results to the National Center for Environmental Compliance (NCEC). There have been no significant negative impacts to the area's biodiversity or the protected species, and Ma'aden has agreed to plant approximately 100,000 of multiple types of plants to increase the vegetation cover around the mine, creating a positive impact on the area and wildlife habitats. MGBM has also undertaken an initiative to provide signboards for the protection of the area and increased awareness of the importance of the wildlife.

# ENERGY USAGE, GHG EMISSIONS & BIODIVERSITY

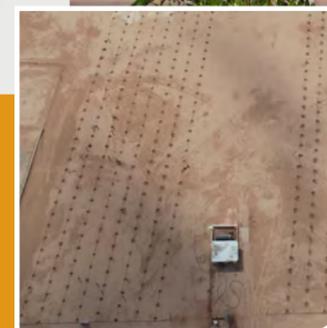
## LOCAL CONTENT PROGRAM / ENVIRONMENT SUCCESS STORY



Ma'aden is working with local investor *Gulf Cryo* to help facilitate their construction and operation of a **carbon dioxide production plant** which will recover raw CO<sub>2</sub> gas from Ma'aden's ammonia operations to produce food and beverage grade CO<sub>2</sub> to be sold to the KSA market. This development not only drives increased capability and capacity in industrial gases in KSA, but lowers costs, improves operational and safety risks and secures a localized source of supply with reduced lead times, representing an important step forward in reducing Ma'aden's carbon footprint and environmental impact. Both parties have signed a Memorandum of Understanding and are jointly working to develop the project. The new investment is estimated at £30m and will employ 25 new employees, of which approximately 50% are forecasted to be Saudi nationals. Production is estimated to come on stream in Q1 of 2023.



Throughout 2021, Ma'aden was in negotiations to participate in the Saudi Green Initiative to aid in the planting of thousands of trees. So far, Ma'aden has committed to planting 50,000 trees throughout 2022 and has signed a memorandum of understanding with the National Center for Vegetation Cover to plant 20 million by 2040, contributing to the initiative's masterplan of adding 10 billion trees to afforest the desert and improve air quality, reduce sandstorms, combat desertification and lower temperatures in adjacent areas.



## MATERIALS & WASTE MANAGEMENT

Ma'aden is currently constructing new sites that will grow operations. While Ma'aden's growth will tremendously benefit the Kingdom through economic contribution, local employment and positive community impact, Ma'aden also recognizes this operational expansion will lead to additional materials usage, waste generation and waste management responsibilities.

In addition to continuing to actively train employees at all sites on waste identification and classification leading practices, on-site storage, off-site disposal and accurate and compliant reporting and implementing a Tailings and Residue Management Standard in 2020, Ma'aden has introduced a new waste intensity metric of waste/revenue and put 2030 and 2040 goals in place to reduce this and ensure that along with our expansion our waste does not proportionally grow.

Management to this end will be done by annual tracking from each affiliate of waste through these KPIs, to reach the 2030 and 2040 goals.



### NEW WASTE GOAL:

Reduce waste to landfill per revenue to **39% of 2020 baseline by 2030** and to **20% of baseline by 2040**



Total materials used (non-renewable and renewable) decreased by **8.5%**

Overall, the amount of material consumed to produce and package Ma'aden's primary outputs decreased by 8.5% from 2021 to 2020. However, the amount of solid waste Ma'aden produced increased by 4% and the amount of liquid waste produced (such as tailings and waste oils) increased by 29%. Ma'aden diverts waste from landfills wherever possible and throughout the year 1% of solid waste and 5% of liquid waste were recovered, both representing an increase in the amount of waste recovered compared to 2020. Ma'aden continues to explore new methods of recovering, recycling and reusing waste types where possible and, for hazardous waste reduction specifically, Ma'aden plans to align to anticipated governmental targets such as the National Center for Waste Management under MEWA, which aims to have 50% hazardous waste diversion from landfills and reach 90% proper treatment and disposal of hazardous waste.

Ma'aden recognizes that further improvements can be made related to its materials management and waste reduction for all types of materials and waste and with the new 2030 and 2040 goals in place and are increasingly implementing, tracking, and improving efficiency and reduction measures.



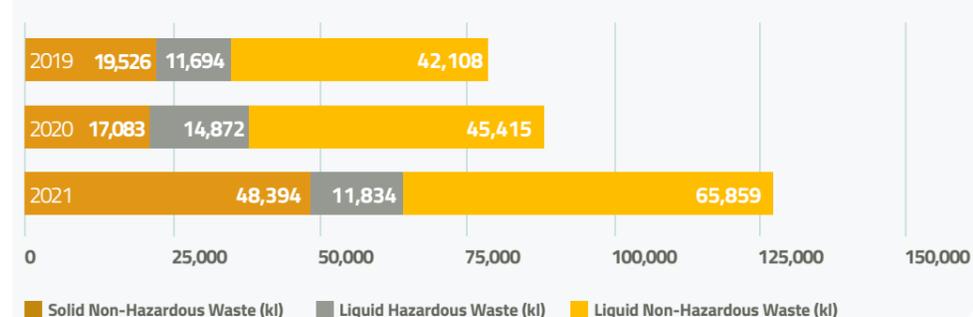
## MATERIALS & WASTE MANAGEMENT



### SOLID HAZARDOUS WASTE



### HAZARDOUS & NON-HAZARDOUS WASTE (excluding Solid Hazardous)



### HAZARDOUS & NON-HAZARDOUS WASTE (Recovered)





In Saudi Arabia’s desert climate, with saltwater surrounding on three sides and limited bodies of fresh water, groundwater is an invaluable resource. In 2021 Ma’aden completed a water usage footprint, setting 2020 as the baseline year, with targets to reduce groundwater usage intensity across applicable affiliates.

Gold mining operations can be very water intensive. In 2021, a major water stewardship initiative was undertaken by Ma’aden’s gold mining affiliate Ma’aden Gold and Base Metals (MGBM) to reduce the amount of fresh groundwater used in its gold mining operations by switching to alternatives. To this end, MGBM developed a groundwater intensity (m<sup>3</sup>/oz gold produced) reduction strategy, entailing using National Water Company (NWC) treated sewage wastewater in all upcoming new gold mines, eliminating the use of fresh groundwater entirely.

By the end of 2021, 99% of all water needs of MGBM’s Ad Duwayhi mine was sourced from treated waste water. Overall, 36% of MGBM’s overall water needs are met by using treated water. As Ma’aden’s gold operations grow, this model will be used from the onset for all new mines. MGBM is nearing construction of its Mansourah Massarah mine and evaluating an Ar Rjum mine and Mahd expansion—all of which would utilize treated sewage water completely and be powered by 20% renewable solar energy by 2025. This approach is projected to reduce MGBM’s groundwater intensity by over 50% by 2030.

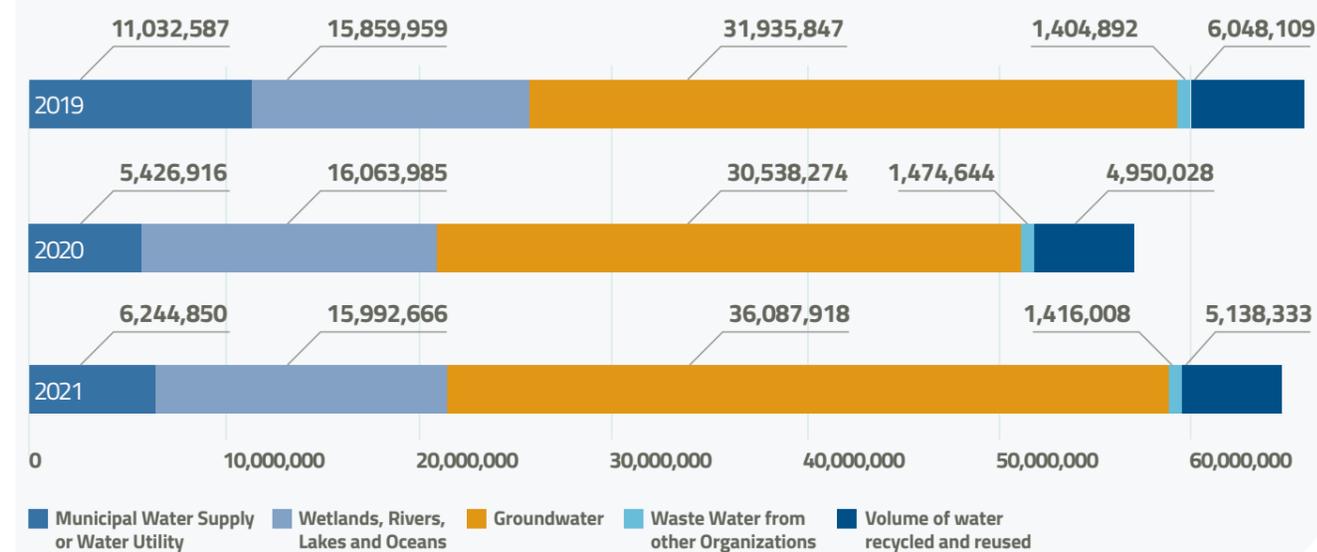
Each affiliate is empowered and encouraged to contribute to Ma’aden’s Water Stewardship goal in the way that is most effective for their operations. In 2021 Ma’aden’s phosphate mining affiliates expanded upon the partnership with NWC started in 2020 by signing a water usage Memorandum of Understanding for our Wa’ad Al Shamal operational site to provide phosphate operations with treated wastewater. Ma’aden also plans to develop infrastructure for the transportation of wastewater from treatment facilities to operational sites in the area. This project is planned to be completed in 2023 and will provide the majority of the water requirement 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.



**NEW WATER STEWARDSHIP GOAL:**  
Reduce Groundwater Usage to **53% of 2020 baseline level by 2030** and to **30% of baseline level by 2040**

Ma’aden Aluminium’s (MA) complexes are located in arid regions that have freshwater stress. The main sources of water are desalinated water and brackish groundwater. Where groundwater is used, a hydrological study was conducted of the brackish Neogene aquifer below the al-Baitha mine, to demonstrate the water sustainability of the aquifer. The study determined that in 2021 the water risk at Al-Baitha mine is minor, so MA is focusing on improving desalination efficiency to have a high water recovery percentage. For desalinated water used by MA’s casthouse, MA is planning to install a reverse osmosis system to reduce water consumption by approximately 28% in 2022.

## TOTAL WATER USAGE (ki)



*This does not include sea water being used for cooling, that is withdrawn, used for cooling in a closed loop, and discharged back to the sea in compliance with the MEWA direct discharge standard.*



## Additional Facts & Figures



Materials - GRI 301	Unit	2019	2020	2021
Materials used to produce and package the organization's primary products and services	mt	18,124,886	32,809,258	29,083,145
Non-renewable materials used	mt	17,933,463	31,703,344	28,888,348
Renewable materials used	mt	191,423	1,105,914	194,797

Energy & Energy Intensity - GRI 302	Unit	2019	2020	2021
Natural Gas	Gj	109,061,157	116,678,411	101,195,816
Diesel and Heating Fuel	Gj	10,872,132	7,831,628	7,698,215
Crude Oil	Gj	991,723	1,912,900	0
Electricity	Gj	50,236,684	52,123,897	49,202,087
Self-Generated (waste heat)	Gj	14,621,329*	15,109,693*	12,845,666
<b>Total Energy Consumption</b>	<b>Gj</b>	<b>185,783,025</b>	<b>193,656,528</b>	<b>170,941,784</b>
Total Energy Consumption Gj/Million SAR of Revenue	Gj/Million SAR	10,475	9,704	6,386
Total Revenue	Million SAR	17,736	18,580	26,769

Energy figures do not include gasoline used in contracted vehicles that are under Ma'aden's operational control, which could not be included in this Report but is planned for inclusion in future reports.

\*These figures have been updated since being published in the 2019 and 2020 Sustainability Reports.

Water and Effluents - GRI 303 (v2018)	Unit	2019	2020	2021
<b>Total water withdrawal</b>	<b>kl</b>	<b>60,233,286</b>	<b>53,503,819</b>	<b>59,750,381</b>
Water from municipal water supply or water utility	kl	11,032,587	5,426,916	6,253,780
Water drawn from wetlands, rivers, lakes and oceans*	kl	15,859,959	16,063,985	15,992,666
Water drawn from groundwater	kl	31,935,847	30,538,274	36,087,918
Rainwater collected for reuse	kl	0	0	0
Waste water from other organization for use	kl	1,404,892	1,474,644	1,416,008
Water sources significantly affected by withdrawal	#	0	0	0
<b>Volume of water recycled and reused</b>	<b>kl</b>	<b>6,048,109</b>	<b>4,950,028</b>	<b>5,138,333</b>
Volume of water recycled and reused as a percentage of the total water withdrawal	%	10.04%	9.25%	4.31%

\*This does not include sea water being used for cooling, that is withdrawn, used for cooling in a closed loop, and discharged back to the sea in compliance with the MEWA direct discharge standard.

Water Discharge - GRI 303-4 (v2018)	Unit	2019	2020	2021
<b>Total water discharge</b>	<b>kl</b>			<b>895,662,808</b>
Discharge to surface water	kl			0
Discharge to groundwater	kl			0
Discharge to seawater	kl			895,662,808
Discharge to third-party	kl			0

Affiliate MWSPC is a zero-effluent discharge facility, and instead reuses all waste water in the gypsum stack process to compensate evaporation loss, and reuses all decant water in the gypsum slurry process.

# Additional Facts & Figures

Emissions & Emissions Intensity - GRI 305	Unit	2019	2020	2021
Scope 1 (CO <sub>2</sub> e Emissions)	Ton	6,647,064	6,766,510	7,674,669
SO <sub>2</sub>	Ton	10,872	24,237	22,616
NO <sub>2</sub>	Ton	1,234	2,448	1,627
Scope 2 (CO <sub>2</sub> e Emissions)	Ton	6,467,641	5,894,209*	5,204,296
Ton CO <sub>2</sub> e/Million SAR of Revenue (Includes HQ and Affiliates Scope 1 and 2)	Ton CO <sub>2</sub> e/Million SAR	711	680	482.02
Ton CO <sub>2</sub> e/Ton Aluminium Production (Includes Scope 1 and 2 for MAC, MRC, MBAC)	Ton CO <sub>2</sub> e/Ton Aluminium	8.69*	8.68*	8.70
Ton CO <sub>2</sub> e/Ounce Gold Production (Includes Scope 1 and 2 for MGBM)	Ton CO <sub>2</sub> e/Ounce	0.68	0.72	0.81
Ton CO <sub>2</sub> e/Ton Product (Includes Scope 1 and 2 for IMC)	Ton CO <sub>2</sub> e/Ton Product	0.036	0.033	0.026

Emissions figures do not include emissions related to gasoline usage or refrigerants, which could not be included in this Report. The change in Scope 2 emissions from 2020 to 2021 is due in-part to successful emissions reduction efforts by some affiliates and in-part to an emission factor change by Aluminium affiliates (of 0.425 mt

CO<sub>2</sub>e/MWh to 0.4) based on the American Petroleum Institute's reference for the technology used by power supplier SWCC.

\*This figure has been updated since being published in the 2020 Sustainability Report.

Employment - GRI 401	Unit	2019	2020	2021
New employees - Men	Total	166	367	240
New employees - Women	Total	11	26	26
Employee Leaving - Men	Total	265	531	557
Employee Leaving - Women	Total	0	6	12

Employee Breakdown by Gender	2019		2020		2021	
	#	%	#	%	#	%
No. of FTEs (Full Time Employees) - Men	5,811	99.8%	5,769	99%	5,777	98%
No. of FTEs (Full Time Employees) - Women	11	0.2%	68	1%	131	2%
Local Nationals - Men	3,609	99.8%	4,036	98%	4,223	98%
Local Nationals - Women	6	0.2%	68	2%	98	2%
Managers & Directors - Men	182	99.5%	249	99.6%	289	99.3%
Management Positions - Women	1	0.5%	1	0.4%	2	0.7%

Contractor Personnel Breakdown by Gender	2019		2020		2021	
	#	%	#	%	#	%
No. of Global Contractors - Men	1,509	99.9%	1,366	100%	1,153	100%
No. of Global Contractors - Women	2	0.1%	0	0%	0	0%

Aluminium Stewardship Initiative (ASI) Performance Standard						
ASI 3.3b - Payments to Governments (Bauxite Mining)						
Government Entity	2016	2017	2018	2019	2020	2021
Ministry of Industry and Mineral Resources	196,0000	1,480,000	1,470,000	2,950,000	1,776,000	1,480,000
Chamber of Commerce & Industry	10,000	47,409	–	–	–	0
Tourism Development Council	–	250,000	–	–	–	0
Ministry of Labour Office	–	–	863,848	–	20,000	0
Ministry of Commerce and Investment	–	6,000	–	–	–	0
<b>TOTAL (SAR)</b>	<b>1,970,000</b>	<b>1,783,409</b>	<b>2,333,848</b>	<b>2,950,000</b>	<b>1,796,000</b>	<b>1,480,000</b>

ASI 5.1 - Disclosure of GHG emissions and energy use					
Ma'aden Aluminium Affiliates	Unit	2021			Ma'aden Aluminium TOTAL
		MBAC	MAC	MRC	
<b>GHG Emissions</b>					
Scope 1 CO <sub>2</sub> e	Ton	1,010,226	1,408,267	71,538	<b>2,490,031</b>
Scope 2 CO <sub>2</sub> e	Ton	182,955	4,567,332	110,367	<b>4,860,654</b>
<b>Energy Use</b>					
Natural Gas	m <sup>3</sup>	472,121,055	65,551,325	32,698,793	<b>570,371,173</b>
Diesel and Heating Fuel	kl	15,005	2,928	357	<b>18,291</b>
Crude Oil	Ton	0	0	0	<b>0</b>
Electricity Use	kWh	457,387,440	11,418,330,554	275,917,240	<b>12,151,635,244</b>

## ASI 5.2 - GHG emissions reductions

Ma'aden Aluminium's target is to reduce Scope 1 & 2 GHG emission intensity by 50% by 2030 and to net-zero by 2050. Ma'aden Aluminium will be scaling up production which with current technology would result in projected emissions of approximately 23 million tonnes of CO<sub>2</sub> in 2040. Ma'aden's reduction plan limits Ma'aden Aluminium's emissions to approximately 3 million tonnes 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).

ASI 6.4b - Waste management and reporting					
Ma'aden Aluminium Affiliates	Unit	2021			Ma'aden Aluminium TOTAL
		MBAC	MAC	MRC	
Weight of Solid Hazardous Waste	Ton	2,234,203	14,764	6,848	<b>2,255,815</b>
Weight of Liquid Hazardous Waste	kl	2,233,909	336	0	<b>2,234,245</b>
Weight of Solid Non-Hazardous Waste	Ton	1,027	31,188.80	5,648.00	<b>37,863</b>
Weight of Liquid Non-Hazardous Waste	kl	2,400	0	0	<b>2,400</b>

Ma'aden Aluminium's total Solid Hazardous Waste landfilled was 9,736 tons; total recovered was 7,354 tons. Total Liquid Hazardous Waste landfilled was 2,456 tons; total recovered was 3,777 tons. Total Non-Hazardous Waste (both types) landfilled was 3,232 tons; total recovered was 6,658 tons.

# Additional Facts & Figures

ASI 7.3 - Disclosure of water usage and risks					
Ma'aden Aluminium Affiliates	2021				Ma'aden Aluminium TOTAL
	Unit	MBAC	MAC	MRC	
<b>Water Withdrawal</b>					
Water from municipal water supply or water utility	kl	4,477,007	1,483,003	284,840	<b>6,244,850</b>
Water drawn from wetlands, rivers, lakes, and oceans	kl	3,822,699	0	366,321	<b>4,189,020</b>
Water drawn from groundwater	kl	220,277	0	0	<b>220,277</b>
Rainwater collected for reuse	kl	0	0	0	<b>0</b>
Waste water from other organization for use	kl	0	0	0	<b>0</b>
Water sources significantly affected by withdrawal	-	No	No	No	<b>No</b>
<b>Total water withdrawal</b>	<b>kl</b>	<b>8,519,983</b>	<b>1,483,003</b>	<b>651,161</b>	<b>10,654,147</b>
<b>Water Recycled and Reused</b>					
Volume of water recycled and reused	kl	414,792	0	124,803	<b>539,595</b>
<b>Water Discharge</b>					
<b>Total water discharge</b>	<b>kl</b>	<b>4,682,240</b>	<b>0</b>	<b>636,162</b>	<b>5,318,402</b>
Discharge to seawater	kl	4,682,240	0	636,162	<b>5,318,402</b>
Discharge to third-party	kl	0	0	0	<b>0</b>

Production	Unit	2019	2020	2021
<b>Aluminium</b>				
Fresh molten Aluminium	Ton	762,186	796,009	805,056
Recycled Aluminium (CRU+Remelt)	Ton	204,563	214,553	397,900
<b>Casthouse Total</b>	<b>Ton</b>	<b>966,749</b>	<b>1,010,562</b>	<b>1,202,956</b>
<b>Gold</b>				
Tons Mines	Ton	42,907,898	46,831,094	53,212,419
Au Produced	Ounces	399,232	408,831	343,346
<b>Phosphate</b>				
Phosphoric Acid P2O5 (MWSPC)	Ton	1,117,500	1,117,500	2,052,069
DAP-1 (as DAP Eq.)	Ton	2,947,102	2,947,102	2,852,069
DAP-2 (as DAP Eq.)	Ton	2,269,363	2,269,363	2,236,103
Ammonia-1	Ton	1,234,283	1,234,283	748,302
Ammonia-2	Ton	1,027,247	1,027,247	1,063,174
Sulfuric acid plant	Ton	4,780,072	4,780,072	8,818,430
Phosphoric Acid plant	MT P2O5	1,442,700	1,442,700	1,362,013
Bene- Phosphate Rock (Wet + Sizing)	DMT	6,098,561	6,098,561	5,576,545
<b>Industrial Minerals</b>				
CCM (Plant)	Ton	36,989	29,259	31,727
DBM (Plant)	Ton	17,016	65	19,908
MONO (Plant)	Ton	970	-	-
Ore (Ghazala)	Ton	142,957	55,662	112,519
Kaolin (Zabirah)	Ton	148,283	154,221	163,885
LGB (Zabirah)	Ton	490,780	599,801	750,067
<b>Total Ores and Product</b>	<b>Ton</b>	<b>836,994</b>	<b>839,009</b>	<b>1,078,106</b>

# GRI, ICMM & UN SDGs Index

Using the GRI Standards as a leading practice guide for disclosure, the content of this 2021 Sustainability Report has been prepared in reference to the specific GRI Standards listed below:

GRI Topic	GRI Standard Disclosure	Information	Source	ICMM Principles	UN SDGs
General Disclosures	102-1	<b>Name of the organization</b>	The Saudi Arabian Mining Company – the Company is known as Ma’aden. The Company and its project companies are collectively “the Group”.		
	102-2	<b>Activities, brands, products, and services</b>	Ma’aden is a leading mining and metals company in the Kingdom of Saudi Arabia, with a diverse portfolio of mineral assets at various stages of development including: exploration, development, and production. Ma’aden has a broad commodity focus spanning gold, zinc, phosphate, aluminum, and industrial minerals.		
	102-3	<b>Location of headquarters</b>	Riyadh, Kingdom of Saudi Arabia		
	102-4	<b>Location of operations</b>	This report covers Ma’aden HQ and its 7 affiliates; Ma’aden Aluminium (MRC, MBAC, MAC), Ma’aden Gold & Base Metals (MGBM), 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.		
	102-5	<b>Ownership and legal form</b>	Ma’aden is a Saudi Joint Stock Company listed in the Saudi Stock Exchange. Ma’aden was formed by the Royal Decree number m/17 date 14/11/1417 (H) to undertake all mining activities and development of mining sector in the kingdom.		
	102-6	<b>Markets served</b>		2020 Annual Report	
	102-7	<b>Scale of the organization</b>	In 2021 Ma’aden employed 5,908 full-time equivalent employees, and utilized an additional 1,153 global contractor personnel. Full information on the size of our operations, production and sales are included in Ma’aden’s Annual Report.		
	102-8	<b>Information on employees and other workers</b>	Ma’aden does not employ personnel on temporary contracts; therefore there were zero temporary employees. Ma’aden did utilize an additional 1,153 contractors beyond FTEs during 2021 (a continual decrease since 2019).	p.28	
	102-9	<b>Organization’s supply chain</b>	Full information on Ma’aden’s supply chain are included in Ma’aden’s Annual Report.		
	102-10	<b>Significant changes to the organization and its supply chain</b>	In 2021 there were no significant changes to Ma’aden’s structure.	p.16–19	
	102-11	<b>Precautionary principles or approaches</b>	Details on Ma’aden’s approach to risk management in operational planning can be found in Ma’aden’s Annual Reports.		2, 4

GRI Topic	GRI Standard Disclosure	Information	Source	ICMM Principles	UN SDGs	
General Disclosures (Continued)	102-12	<b>External initiatives</b>	GRI Reporting Practices, SDGs, Vision 2030, CSR projects and industry related-frameworks.	p.10	1, 2	17
	102-13	<b>Membership of associations</b>		2020 Annual Report		
	102-14	<b>Statement from senior decision-maker</b>	Message from the CEO	p.2–3	2	
	102-15	<b>Key impacts, risks, and opportunities</b>		p.2-3, 11, 16, 18, 21		
	102-16	<b>Values, principles, standards, and norms of behavior</b>	Our Code of Conduct articulates our approach to business ethics, anti-corruption and anti-bribery, and sets the standards for responsible and appropriate behavior. Our Code of Conduct highlights that unethical activity is a disciplinary offense that could lead to dismissal.	Code of Conduct	1, 2	
	102-17	<b>Mechanism for advice and concerns about ethics</b>	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.	p.12–13	1, 2	
	102-18	<b>Governance structure</b>	Ma’aden’s corporate governance structure consists of a Board of Directors and a further four functional Board Committees, responsible for reviewing the Company’s operations within their particular areas of expertise and who then present their findings and suggestions to the Board of Directors.	p.10, 2020 Annual Report	1, 2	
	102-19	<b>Delegating authority</b>	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.		1, 2	
	102-20	<b>Executive-level responsibility for economic, environmental, and social topics</b>	Our governance framework is designed to enhance accountability through the recognition and management of all risk areas. It specifies the distribution of rights and responsibilities among various participants of the Group, including our Board of Directors and its four functional committees, our executive managers and our employees.		1, 2	
	102-21	<b>Consulting stakeholders on economic, environmental, and social topics</b>	We engage formally and informally on an ongoing basis with our key stakeholders, first among whom are our customers, our employees and local communities. Following a comprehensive review of our non-financial material issues in 2018, we have continued our work with consulting companies to update issues most relevant to our stakeholders and our business, and conducted a material issue refresh in 2020. A formal Materiality Assessment will be conducted again in 2022.	p.10, 30	1, 2, 10	

GRI Topic	GRI Standard Disclosure		Information	Source	ICMM Principles	UN SDGs
General Disclosures (Continued)	102-22	Composition of the highest governance body and its committees	Our sustainability priorities and actions are guided by our management team, and are informed by the needs and opportunities of our local communities. This structure allows us to prioritize sustainability as a Group-wide imperative, while maintaining the flexibility to invest in targeted local programs and share learnings from community initiatives across our portfolio.		1, 2	
	102-40	List of stakeholder groups		2019 Sustainability Report p.13	10	17
	102-41	Collective bargaining agreements	This does not apply to the Kingdom of Saudi Arabia.		3	
	102-42	Identifying and selecting stakeholders	Ma'aden identifies and selects stakeholders through a formal Materiality Assessment every 4 years, and material issue refreshes every 2 years in between the Materiality Assessments.	2019 Sustainability Report p.13	10	
	102-43	Approach to stakeholder engagement	This report uses 2021 internal stakeholder leadership interviews and the 2020 material issue refresh findings (to be representative of continuing external stakeholder views). No external stakeholder engagement was specifically taken as a part of this report process.	p.10, 2020 Sustainability Report p.11, 2019 Sustainability Report p.12-14	10	
	102-44	Key topics and concerns raised		2020 Sustainability Report p.11	10	
	102-45	Entities included in the consolidated financial statements	All of Ma'aden and its business units have been included in Ma'aden's consolidated financial statement.	Consolidated Financial Statement	10	
	102-46	Defining report content and topic boundaries	The topic boundaries have been defined based on the GRI Standards, Core Option informed by Ma'aden's 2019 Materiality Assessment and 2020 Materiality Refresh, which each covered Ma'aden HQ and its 7 affiliates; Ma'aden Aluminium (MRC, MBAC, MAC), Ma'aden Gold & Base Metals (MGBM), Industrial Minerals Company (IMC), and Ma'aden Phosphate (MWSPC, MPC).	Inside Cover	10	
	102-47	List of material topics	Material topics per 2020 material issue refresh (most recent): Climate Change & Energy Efficiency, Air Quality, Hazardous Materials Management, Water Resources & Quality Management, Social Initiatives, Local Content Development, Economic Development, Regulatory & Legal Compliance, Business Integrity, Health & Safety	2020 Sustainability Report p.11	10	
	102-48	Restatements of information	There may be minor cases of restatements of information denoted throughout this report, due to improvements in measurement, historical data collection and analysis since the publishing of the 2020 Sustainability Report.		10	
	102-49	Changes in reporting	This is our third annual Sustainability Report in accordance with the GRI: Core option, and there are no major changes in reporting from the previous year, other than the inclusion of additional Aluminium Stewardship Initiative (ASI) disclosures.		10	

GRI Topic	GRI Standard Disclosure		Information	Source	ICMM Principles	UN SDGs
General Disclosures (Continued)	102-50	Reporting period	1st January to 31st December 2021		10	
	102-51	Date of most recent report	Ma'aden's 2020 Sustainability Report was our second annual Sustainability Report in compliance with the GRI standards.		10	
	102-52	Reporting cycle	Annual		10	
	102-53	Contact point for questions regarding the report	Mr. Eng. Mohammed Awadh Alrashdi, Director, Corporate Sustainability Assurance, Ma'aden. Tel: +966 (11) 283 8138 E mail: AlrashdiM@maaden.com.sa		10	
	102-54	Claims of reporting in accordance with the GRI Standards	This report has been prepared in accordance with the GRI Standards: Core option.			
	102-55	GRI content index		p.52-61	10	
	102-56	External assurance		p.62-63	10	
Economic Performance	103 (201)	Management Approach: Economic Performance		2020 Annual Report		
	201-1	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings and payments to capital providers and to governments.		<a href="https://www.maaaden.com.sa/en/investor/figures">https://www.maaaden.com.sa/en/investor/figures</a>	9	5, 7, 8, 9
	201-2	Financial implications and other risks and opportunities due to climate change	Ma'aden is committed to responsible management of climate-related risks. We prioritize efficiency across our operations, and carefully assess and manage our environmental impacts. We recognize the need for climate resiliency in our long-term physical assets, and contribute to climate change mitigation efforts through our proactive operational planning, diversification of supply chains, implementation of leading technologies, and growing investments in alternative energies.		6	

GRI Topic	GRI Standard Disclosure		Information	Source	ICMM Principles	UN SDGs
Indirect Economic Impacts	103 (203)	Management Approach: Indirect Economic Performance		p.14-23		
	203-1	Infrastructure investments and services supported	In addition to hiring nationals, providing skills training and professional development, Ma'aden advances its local content strategy and programs throughout its value chain to the fullest extent possible. We strive to persuade supply chain partners to apply our values of local procurement, employment and training of the local workforce, and technology transfer.	p.14-23	9	5, 7, 9, 11
	203-2	Significant indirect economic impacts		p.14-23		
Procurement Practices	103 (204)	Management Approach: Procurement Practices		p.11, 12, 15		12
	204-1	Proportion of spending on local suppliers	Ma'aden defines "local" as within the Kingdom of Saudi Arabia. The topic includes all locations of operation.	p.16, 23	2, 9, 10	12
Anti-corruption	103 (205)	Management Approach: Anti-Corruption		p.12-13, Code of Conduct p.27-28	1	
	205-1	Operations assessed for risks related to corruption	100% of our operations have been assessed for risks related to corruption.	p.12	1	16
	205-2	Communication and training about anti-corruption policies and procedures	100% of Ma'aden's governance body members, employees, and business partners have been communicated the organization's anti-corruption policies and procedures.	p.12	1	16
Anti-competitive Behavior	103 (206)	Management Approach: Anti-competitive Behavior	This does not apply to state-owned companies in the Kingdom of Saudi Arabia.			
	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	They were no legal actions for anti-competitive behavior, anti-trust, or monopoly practices or related fines or sanctions to report.	p.12		

GRI Topic	GRI Standard Disclosure		Information	Source	ICMM Principles	UN SDGs
Materials	103 (301)	Management Approach: Materials		p.42		
	301-1	Materials used by weight or volume		p.47	6, 8	8, 12
	301-2	Recycled input materials used	Recycled input materials were not used to any significant percentage.		6, 8	8, 12
Energy	103 (302)	Management Approach: Energy	Climate Change & Energy Efficiency is a material topic. Energy consumption covers Ma'aden's 7 affiliates and HQ, and includes electricity, natural gas, diesel and heating fuel, and self-generated. It does not include gasoline usage for fleet vehicles.	p.39	6	
	302-1	Energy consumption within the organization	Energy consumption includes Ma'aden's 7 affiliates and HQ. Total energy includes electricity, natural gas, diesel and heating fuel, and self-generated. It does not include gasoline usage for fleet vehicles.	p.39	6	7, 8, 12, 13
Water and Effluents	103 (303)	Management Approach: Water and Effluents	Water Resources & Quality Management is a material topic.	p.44-45	1, 6	6
	303-1 (2018)	Total water withdrawal and water withdrawal by source		p.45	6	6
	303-2 (2018)	Management of water discharge-related impacts	All affiliates are operating under the water discharge standards of MEWA and National Center for Environmental Compliance or the Royal Commission in Ras Al Khair. Affiliates do not discharge industrial effluents to the environment. Sea water being used for cooling is withdrawn, used for cooling in a closed loop, and discharged back to the sea in compliance with the direct discharge standard.		6	6
	303-3 (2018)	Water recycled and reused		p.45	6	6
	303-5 (2018)	Water Consumption		p.47	6, 8	6

GRI Topic	GRI Standard Disclosure		Information	Source	ICMM Principles	UN SDGs
<b>Biodiversity</b>	103 (304)	<b>Management Approach: Biodiversity</b>	Ma'aden used the Biodiversity Management standard MSHEM-15.04 enlist protocols of periodical biodiversity monitoring, assessments and action plans.		6, 7	
	304-1	<b>Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas</b>	Ma'aden manages one operation located in a protected area and area of high biodiversity value, MGBM's Alsouq gold mine (4.79 km <sup>2</sup> ) which is located within the Saja Umm Ar-Rimth Natural Reserve.	p.40	2, 6, 7	6, 14, 15
	304-2	<b>Significant impacts of activities, products, and services on biodiversity</b>	There were no material off-site impacts on biodiversity to be reported.	p.40	7	6, 14, 15
	304-4	<b>IUCN Red List species and national conservation list species with habitats in areas affected by operations</b>	There is one IUCN Red List species with habitats in areas affected by operations, the Houbara Bustard (a large terrestrial bird) whose global population is listed as Vulnerable. The area is the Saja Umm Ar-Rimth Natural Reserve where MGBM operates the Alsouq gold mine. There have been no significant negative impacts on the species.	p.40	6, 7	6, 14, 15
<b>Emissions</b>	103 (305)	<b>Management Approach: Emissions</b>	Air Quality is a material topic.	p.39-41	6	
	305-1	<b>Direct (Scope 1) GHG emissions</b>	Direct (Scope 1) CO <sub>2</sub> emissions includes all 7 of Ma'aden's affiliates and HQ. It does not include emissions related to gasoline usage or blasting explosives usage. 2021 Scope 1 emissions were calculated using the GWP from the IPCC's 5th assessment report. The Tier-1 method was used utilizing estimated emissions factors based on utility production design.	p.40, 48	6, 10	12, 13, 15
	305-2	<b>Energy indirect (Scope 2) GHG emissions</b>	Indirect (Scope 2) CO <sub>2</sub> emissions includes Ma'aden's 7 affiliates and HQ. The change in Scope 2 emissions from 2020 to 2021 is due in-part to successful emissions reduction efforts by some affiliates and in-part to an emission factor change by Aluminium affiliates (of 0.425 mt CO <sub>2</sub> e/MWh to 0.4) based on the American Petroleum Institute's reference for the technology used by power supplier SWCC. (Other affiliates used a factor of 0.654 mt CO <sub>2</sub> e/MWh).	p.40, 48	6, 10	12, 13, 15
<b>Waste</b>	306-1 (2020)	<b>Management Approach: Waste generation and significant waste-related impacts</b>		p.42	7	
	306-2 (2020)	<b>Management Approach: Management of significant waste-related impacts</b>	Ma'aden disposes of hazardous waste through approved third-party contractors, or reuses the waste internally.	p.42	7	
	306-3 (2020)	<b>Waste generated</b>		p.43	6, 8	6, 12
	306-4 (2020)	<b>Waste diverted from disposal</b>		p.43	6, 8	6, 12

GRI Topic	GRI Standard Disclosure		Information	Source	ICMM Principles	UN SDGs
<b>Waste</b>	306-5	<b>Waste Directed to disposal</b>	Liquid Hazardous waste such as contaminated oil and diesel is monitored and reused internally or disposed via approved agencies. All waste disposed off-site is done through an approved 3rd party contractor.	p.43	6, 8	6, 12
<b>Environmental Compliance</b>	307-1	<b>Non-compliance with environmental laws and regulations</b>	Ma'aden's two instances of non-compliance were both corrected and closure on the non-compliance was received from the regulators.	p.40	6	16
<b>Supplier Environmental Assessment</b>	308-1	<b>New suppliers that were screened using environmental criteria</b>	Ma'aden does not currently screen new suppliers using environmental criteria. A new goal set in 2021 is to be screening 50% of suppliers for environmental impacts by 2030, and screening 75% by 2040.	p.11	6	16
<b>Employment</b>	103 (401)	<b>Management Approach: Employment</b>		p.28		
	401-1	<b>New employee hires and employee turnover</b>		p.28	3	3, 8
<b>Occupational Health &amp; Safety</b>	103 (403)	<b>Management Approach: Occupational Health &amp; Safety</b>		p.25-27	1, 5	
	403-1 (2018)	<b>Occupational health and safety management systems</b>		p.25	1, 5	
	403-2 (2018)	<b>Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities</b>		p.26	4, 5	3, 8
	403-3 (2018)	<b>Occupational health services</b>		p.25-26	5	8
	403-4 (2018)	<b>Worker participation, consultation, and communication on occupational health and safety</b>		p.25-26	5	8
	403-5 (2018)	<b>Worker training on occupational health and safety</b>		p.25-26, 28	5	8
	403-6 (2018)	<b>Promotion of worker health</b>		p.25-26	5	8
	403-7 (2018)	<b>Prevention and mitigation of occupational health and safety impacts directly linked by business relationships</b>		p.25-26	5	8
	403-9	<b>Work-related injuries</b>		p.26-27	5	3, 8

GRI Topic	GRI Standard Disclosure		Information	Source	ICMM Principles	UN SDGs
Training and Education	103 (404)	Management Approach: Training & Education		p.28	3, 5	
	404-1	Average hours of training per year per employee		p.28	5	4, 5, 8
	404-2	Programs for upgrading employee skills and transition assistance programs		p.28	3, 5	8
	404-3	Percentage of employees receiving regular performance and career development reviews		p.28		5, 8
Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees	At Ma'aden, we strive to create a diverse and inclusive working environment, aligned with national laws and local customs. Our HR and sustainability practices reflect our commitment to inclusion, gender equality and equal employment opportunity in our workplace. In accordance with the local customs where we operate, Ma'aden is advancing initiatives in this regard, including advancing female recruitment efforts and employing female employees at our HQ.	p.28		5, 8
Non-discrimination	103 (406)	Management Approach: Non-discrimination		Code of Conduct		
	406-1	Incidents of discrimination and corrective actions taken		p.28		
Freedom of Association and Collective Bargaining	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk.	This does not apply to the Kingdom of Saudi Arabia. (Trade unions are not permitted in the Kingdom, so no employees are affiliated with a formal labor union or collective bargaining agreement.)	p.12		
Child Labor	408-1	Operations and suppliers at significant risk for incidents of child labor		p.12	3	8, 16

GRI Topic	GRI Standard Disclosure		Information	Source	ICMM Principles	UN SDGs
Forced or Compulsory Labor	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor		p.12	3	8
Security Practices	410-1	Security personnel trained in human rights policies or procedures		p.29		
Rights of Indigenous Peoples	103 (411)	Topic, Management Approach and Evaluation: Rights of Indigenous People		Code of Conduct	1, 3	
	411-1	Incidents of violations involving rights of indigenous peoples	There were no violations reported involving rights of indigenous peoples.	p.29	1, 3	2
Human Rights Assessment	103 (412)	Topic, Management Approach and Evaluation: Human Rights Assessment		Code of Conduct	1, 3	
	412-2	Employee training on human rights policies or procedures	100% of Ma'aden's employees from 2017 through 2021 have been trained in human rights policies or procedures concerning aspects of human rights that are relevant to our operations.	p.29	1, 3	
	412-3	Significant investment agreements and contracts that include human rights clauses of that underwent human rights screening	100% of Ma'aden's agreements include obligatory provisions relating to human rights.	p.29	2	
Local Communities	103 (413)	Topic, Management Approach and Evaluation: Local Communities		p.29-33	1, 2, 9, 10	
	413-1	Operations with local community engagement, impact assessments, and development programs	100% of Ma'aden's operations and community programs implement local community engagement initiatives.	p.29-33	2, 3, 9	
Supplier Social Assessment	414-1	Supplier social assessment		p.16		
Socio-economic Compliance	419-1	Non-compliance with laws and regulations in the social and economic area	Ma'aden had no cases of non-compliance with laws and regulations in the social and economic area.	p.7	4	16



# Independent Assurance Statement

## Scope and Approach

DNV AS – Dubai Branch ('DNV') has been commissioned by Saudi Arabian Mining Company ('Ma'aden' or 'the Company', Commercial Registration Number (CRN) 1010164391) to undertake an independent assurance of the Company's Sustainability Report 2021 in its printed format ('the Report') including references to the Company's Annual Report 2020.

The sustainability disclosures in this Report have been prepared based on the material topics identified by Ma'aden and related performance disclosures from the Global Reporting Initiative ('GRI') Sustainability Reporting Standards ('GRI Standards') covering the economic, environmental and social performance for the activities undertaken by the Company during the reporting period 1st January 2021 – 31st December 2021.

The intended user of this assurance statement is the Management of Ma'aden ('the Management'). Our assurance engagement was planned and carried out during April 2022 – July 2022, and we performed a limited level of assurance based on our assurance methodology VeriSustain™<sup>1</sup>.

## Responsibilities of the Management of Ma'aden and the Assurance Provider

The Management has the sole responsibility for the preparation of the Report and is responsible for all information disclosed in the Report as well as the processes for collecting, analysing and reporting the information presented in the Report. Ma'aden is also responsible for ensuring the maintenance and integrity of its website and any referenced disclosures on sustainability performance. In performing this assurance work, DNV's responsibility is to the Management of Ma'aden; however, this statement represents our independent opinion and is intended to inform the outcome of our assurance engagement to the management and stakeholders of Ma'aden.

We provide a range of other services to Ma'aden, none of which in our opinion, constitute a conflict of interest with this assurance work. Our assurance engagements are based on the assumption that the data and information provided by Ma'aden to us as part of our review have been provided in good faith and free from misstatements. DNV expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Assurance Statement.

## Scope, Boundary and Limitations

The reporting scope and boundary encompasses economic, environment and social performance of Ma'aden's operations excluding its subsidiaries and joint ventures, that is, sustainability performance pertains to Ma'aden's operations including seven (7) affiliates and its Corporate Office located in the Kingdom of Saudi Arabia during the reporting period 1st January 2021 – 31st December 2021, as brought out in the Report in the GRI Content Index.

The assurance engagement considers an uncertainty of ±5% based on materiality threshold for estimation/measurement errors and omissions. We did not engage with any external stakeholders as part of this assurance engagement.

During the assurance process, we did not come across limitations to the scope of the agreed assurance engagement. Our assurance was limited to assurance of the GRI 102: General Disclosures as per the GRI Standards: Core option of reporting and the chosen GRI topic-specific Standards. We understand that certain reported financial and nonfinancial data/information was referenced to Ma'aden's Annual Report 2020. The review of these references in the Annual Report was excluded from our scope of work. The reported data on economic performance and other financial data are based on audited financial statements issued by

Ma'aden's statutory auditors which is subject to a separate audit process. We were not involved in the review of financial information within the Report.

## Basis of our Opinion

As part of the assurance process, a multi-disciplinary team of sustainability specialists performed assurance work for selected sample sites of Ma'aden through remote assessments with the management teams at its Corporate Headquarters at Riyadh, Saudi Arabia and selected affiliates based on DNV's sampling plan. We adopted a risk-based approach, that is, we concentrated our assurance efforts on the issues of high material relevance to Ma'aden's business and its key stakeholders. Due to the COVID-19 pandemic and associated travel restrictions, we undertook remote assessments covering sample operational sites and affiliates in Saudi Arabia, in line with DNV's remote assessment methodology. We carried out the following activities:

- Reviewed the approaches to stakeholder engagement that was conducted in 2021, continued relevance of materiality determination/refresh exercise that was conducted in 2020 and its outcomes as brought out in this Report.
- Reviewed the process of reporting on Organisational Profile, Strategy, Ethics and Integrity, Governance, Stakeholder Engagement and Reporting Practices based on GRI Standards as brought out within the Report.
- Performed a limited testing of data reliability and accuracy through interactions with data owners at the Corporate Headquarters and affiliates that is, remote assessment of the processes for gathering and consolidating performance data related to identified material topics, that is, reviewed sustainability disclosures related to the material topic-specific GRI Standards.
- Carried out remote assessments at sample operational locations, that is, selected affiliates - MPC (Ma'aden Phosphate Company), MBAC (Maaden Bauxite and Alumina Company), MRC (Ma'aden Rolling Company) and MGBM (Ma'aden Gold And Base Metal Company) - to review the processes and systems for aggregating affiliate-level sustainability information, as well as overall aggregation and consolidation of data from affiliates by the sustainability team at the Corporate Headquarters at Riyadh, Saudi Arabia. We were free to choose the sites we sampled for our remote assessments.
- Interviewed key personnel responsible for management of sustainability issues related to the identified material topics and reviewed selected evidence to support issues disclosed in the Report. We were free to choose interviewees and interviewed those with overall responsibility to deliver the Company's overall sustainability objectives.
- Reviewed the performance disclosures of identified material topics and related GRI Standards; that is, carried out an assessment of the processes for gathering and consolidating performance data related to identified material topics and, for samples, checked the processes of data consolidation to assess the Reliability and Accuracy of performance disclosures reported based on GRI's topic-specific Standards identified as being material.
- Verification of the data consolidation of reported performance disclosures in context to the Principle of Completeness as per VeriSustain for a limited level of verification.
- An independent assessment of the Report against the requirements of the GRI Standards: Core option of reporting.

## Opinion and Observations

On the basis of the assurance undertaken, nothing came to our attention to suggest that the Report and referenced information does not properly describe Ma'aden's sustainability performance including adherence to the Principles for Defining Report Content.

Without affecting our assurance opinion, we provide the following observations against the principles of VeriSustain:

### MATERIALITY

*The process of determining the issues that is most relevant to an organization and its stakeholders.*

The Report explains the process through which material issues relevant to Ma'aden's business and stakeholders, and guide the Company's decision-making and strategic planning processes are identified. This involves a formal Materiality Assessment exercise carried out every four years and a Materiality Refresh carried out during the interim period (every two years), involving management surveys and leadership interviews, peer and industry frameworks, and Ma'aden's Vision 2030.

**Nothing has come to our attention to suggest that the Report does not meet the requirements related to the Principle of Materiality.**

### STAKEHOLDER INCLUSIVENESS

*The participation of stakeholders in developing and achieving an accountable and strategic response to Sustainability.*

The Report references its list of key stakeholders, the process of identifying these stakeholders and stakeholder priorities to the section 'Engaging Stakeholders' of Ma'aden's Sustainability Report 2019. The Company's stakeholder engagement processes consider the AccountAbility AA1000 Stakeholder Engagement Standard and the International Association for Public Participation (IAP2) Standard towards identifying and engaging its significant stakeholder groups through formal and informal ongoing mechanisms.

**Nothing has come to our attention to suggest that the Report does not meet the requirements related to the Principle of Stakeholder Inclusiveness.**

### RESPONSIVENESS

*The extent to which an organization responds to stakeholder issues.*

The Report brings out Ma'aden's responses to its identified material topics through descriptions of strategies and performance using selected GRI topic-specific Standards brought out in the Report in the GRI Content Index, as well as overall sustainability objectives and responses to key stakeholder priorities. Ma'aden may further strengthen its disclosures related to management approach to further bring out specific strategies and processes for evaluation of approach for all material topics which have been identified and reported.

**Nothing has come to our attention to suggest that the Report does not meet the requirements related to the Principle of Responsiveness.**

### RELIABILITY

*The accuracy and comparability of information presented in the report, as well as the quality of underlying data management systems.*

The Report brings out the processes that Ma'aden has established towards monitoring, capturing and reporting its performance related to its identified material topics from its various affiliates using customized spreadsheets. The majority of data and information verified by us through remote

### FOR DNV AS - DUBAI BRANCH

<b>Kiran Radhakrishnan</b> Lead Verifier DNV Business Assurance India Private Limited, India.	<b>Prakash Tikare</b> Area Manager – SCPA India Sub-continent and Middle East DNV Business Assurance India Private Limited, India.	<b>Vadakepathth Nandkumar</b> Technical Reviewer DNV Business Assurance India Private Limited, India.
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6th July 2022, Dubai, United Arab Emirates

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verification, that is, with data owners and management at the Corporate Headquarters and sample affiliates were found to be fairly accurate and reliable. Some of the data inaccuracies identified during the verification process of the sample data sets verified were found to be attributable to transcription, interpretation and aggregation errors. The data inaccuracies have been communicated for correction and the related disclosures were reviewed for correctness. Ma'aden may however, strengthen the reliability and accuracy of its reported performance data through formal processes of internal audits and reviews.

**Nothing has come to our attention to suggest that the Report does not meet the requirements related to the Principle of Reliability.**

### COMPLETENESS

*How much of all the information that has been identified as material to the organisation and its stakeholders is reported.*

The Report brings out Ma'aden's performance related to economic, environmental and social topics that it has identified as material through descriptions of management approach, performance metrics, and strategy covering its chosen boundary of reporting, that is, operations of Ma'aden and its affiliates in the Kingdom of Saudi Arabia. However, Ma'aden may further strengthen its disclosures in future reporting periods by identifying and reporting on impacts and performance related to material topics in its external boundaries such as significant value chain entities.

**Nothing has come to our attention to suggest that the Report does not meet the requirements related to the Principle of Completeness.**

### NEUTRALITY

*The extent to which a report provides a balanced account of an organization's performance, delivered in a neutral tone.*

The Report brings out Ma'aden's sustainability performance during the reporting period including sustainability performance and challenges of the Company and its affiliates during the reporting period in a neutral tone in terms of overall content and presentation.

**Nothing has come to our attention to suggest that the Report does not meet the requirements related to the Principle of Neutrality.**

## Statement of Competence and Independence

DNV applies its own management standards and compliance policies for quality control, in accordance with ISO IEC 17021:2015 - Conformity Assessment Requirements for bodies providing audit and certification of management systems, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

We have complied with the DNV Code of Conduct<sup>2</sup> during the assurance engagement and maintain independence as required by relevant ethical requirements relevant ethical requirements including the ISAE 3000 (Revised) Code of Ethics as set out in VeriSustain. This engagement work was carried out by an independent team of sustainability assurance professionals. DNV was not involved in the preparation of any statements or data included in the Report except for this Assurance Statement, Management Report and gap assessment report. DNV maintains complete impartiality toward stakeholders interviewed during the assurance process.

<sup>1</sup> The VeriSustain protocol is based on the principles of various assurance standards including International Standard on Assurance Engagements 3000 (ISAE 3000) Revised (Assurance Engagements other than Audits or Reviews of Historical Financial Information) and the GRI Principles for Defining Report Content and Quality, international best practices in verification and our professional experience; and is available on request from www.dnv.com

# SUSTAINABILITY REPORT 2021

BECOMING A MINING ESG ROLE MODEL