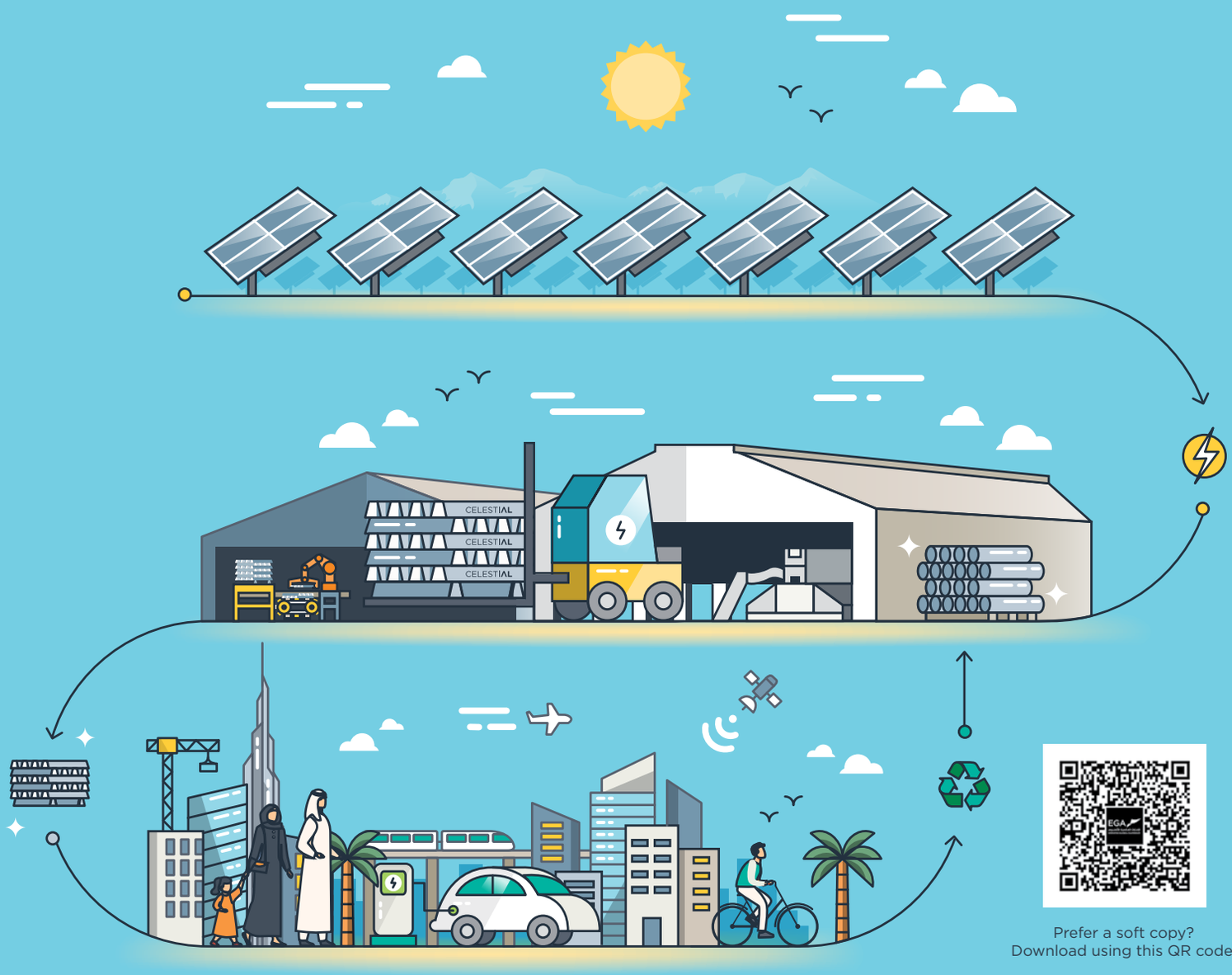
EGA
الإمارات العالمية للألمنيوم
EMIRATES GLOBAL ALUMINIUM

EGA 2021 Sustainability Report

Together, innovating aluminium to make modern life possible



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Together, innovating aluminium to make modern life possible

Aluminium makes modern life possible as part of products and infrastructure we all rely on every day from buildings to electronics, mass transit to beverage cans.

The unique properties of aluminium, its strength, lightness, durability, conductivity and infinite recyclability, make it the ideal solution for many of the challenges that we need to address for a more sustainable future.

But the production of aluminium is not without the potential for negative impacts. At EGA we recognise that in order to be part of a sustainable future, it is important we consider both how aluminium is used in and how aluminium is made.

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Introduction

Introduction

About this report

Welcome to Emirates Global Aluminium's 2021 sustainability report.

All organisations must do their part to support a resilient environment and society. Businesses around the world can be instruments of change having a key role to play in safeguarding our planet's systems and social cohesion. Now, more than ever, transparency around sustainability efforts is business critical.

At EGA, we recognise the need for transparency in order to build stakeholder confidence and substantiate claims related to our sustainability performance. This is why each year EGA publishes an annual sustainability report.

This report has been prepared in accordance with the GRI Standards: Core option[1] and disclosure requirements identified by the Aluminium Stewardship Initiative Performance Standards[2]. We have also considered the disclosure recommendation of the Task Force for Climate-Related Financial Disclosures[3].

Although 2021 is the focus of this report, in some instances we have also referred to data pertaining to key aspects of our business from 2018-2020 in order to illustrate trends in performance[4].

To ensure appropriate content and data quality, the professional auditing firm KPMG independently assured disclosures from selected key performance areas, including our most material sustainability topics. KPMG's assurance statement is provided in the appendix of this report.

For more information on EGA's sustainability activities and performance, please contact sustainability@ega.ae.

Our report covers the 3 pillars of sustainability vital to meeting the expectations of our stakeholders and ensuring a sustainable business.

[1] The Global Reporting Initiative Standards (GRI) provide a framework and international benchmark for public disclosure of sustainability performance. For our 2021 report we have adopted the GRI Core Option and considered the GRI mining and metals supplement.
[2] The ASI Performance Standards define environmental, social and governance performance standards for sustainability issues specific to the aluminium value chain.
[3] The Task Force on Climate Related Financial Disclosures (TCFD) recommends specific climate related disclosures associated with governance, risks, opportunities, management approach and relevant metrics and targets.
[4] EGA has published an annual sustainability report every year since 2018, each report is available on our website at: https://www.ega.ae/en/sustainability/our-approach

The last century has seen incredible technological change and economic growth, but that same progress has strained our world’s environmental and social systems.

Extreme weather events, biodiversity decline, growing inequality, the threat of global pandemics and geopolitical instability all reflect a growing, interconnected set of threats to our planet. More than ever, it is clear that the world cannot just focus on financial growth and the timeworn approach to ‘business as usual’ cannot continue. The success of any organisation must be measured by the value it delivers for its entire range of stakeholders including the full benefits it brings to society and the role it takes in safeguarding planet for the future.

A significant challenge the world faces in safeguarding the future is the necessary decarbonisation of the global economy. Every organisation around the world will be transformed by this challenge.

The properties of aluminium, its light-weighting potential, strength, durability and infinite recyclability, are all well suited to supporting a decarbonising economy and projections are for continued growth in demand for aluminium well into the future. However, the production of aluminium is an energy-intensive process and like other industries around the world, we must find innovative solutions to decarbonise.

In 2021, EGA developed a roadmap to reach net zero emissions by 2050. Through engaging engineers, technologists and economists we developed our roadmap to ensure that what we are planning for the short, medium and long term is both technically and commercially viable. Our roadmap addresses our emissions from all areas of our organisation, including our supply chain, while also considering the future role of recycled aluminium. We have already started to see some of the success of our plans, becoming the world’s first smelter to begin commercial production of aluminium using solar power.

But decarbonisation is only one of the many challenges that the world must tackle in order to safeguard the future. Protecting our oceans, preservation of freshwater, ensuring inclusivity, upholding the rights of the community, resource circularity, physical and mental well-being, eliminating poverty, adapting to a changing climate and the restoration of nature are only some of the essential topics that must be on the agenda for any responsible organisation.

In 2021, in addition to our net zero target, we also set ourselves the bold aspiration that by 2030, we will produce only Aluminium Stewardship certified products. This means ensuring that sustainability-related topics are not only addressed as part of our operations, but also throughout our supply chain.

Abdulla Kalban
Managing Director

In 2021, we launched our newly-defined purpose, mission and values, including sustainability as one of our core values.

A clearly defined purpose, mission and values provide both internal and external stakeholders with clarity regarding our intent as an organisation, as well as how we plan to go about achieving our objectives. With ever-changing risks, challenges and market pressures, the need for clarity of purpose has never been greater.

Our new values have been designed to provide us with a set of reference points so that no matter the challenge we face, we are always true to what we value most. At EGA, this includes our people, our workplace, our communities and our planet.

In 2021, we successfully developed the world's first commercial production of solar aluminium. Having sourced 560,000 MWh of solar power from the Mohammed bin Rashid Al Maktoum Solar Park through a partnership with the Dubai Electricity and Water Authority (DEWA), we produced more than 39,000 tonnes of solar aluminium which we sold under the product brand, CelestiAL. But this is just the beginning. The rapid expansion of both solar and nuclear energy in the UAE will provide EGA with a significant increase in production capacity for low carbon products, helping us on our way to our net zero target.

The health and safety of our people has always been of utmost importance for us at EGA, and in 2021, despite the challenges of COVID-19 and our increase in production, we continued to uphold our strong safety performance. Being mindful of the continuing pandemic's potential toll on mental health, in 2021, we increased our focus on the mental well-being of our employees, establishing a number of 'mental health first aiders' and a series of online support tools covering a variety of mental health-related topics.

In 2021, we also increased our focus on diversity, equity and inclusion. We recognise that the metals and mining industry has historically been a very male-dominated sector capable of creating a non-inclusive work environment for female employees. At EGA, we are challenging this situation.

We have also continued to work closely with our local communities in Guinea. In 2021, as part of our resettlement action plan, we completed the construction of a new resettlement village in Sinthiourou Thiouladji. As with all our resettlements, we have been open and transparent in this process, engaging with communities in advance while making our resettlement action plans publicly available.

We also continued with our livelihood restoration and social investment projects in Guinea. These include programmes designed to improve opportunities and career prospects, agricultural projects as well as supporting people with the skills to start and run their own businesses.

Also in Guinea, alongside specialist ecologists, international civil society groups, the IFC, government representatives and other mining entities we have been part of a project that has a goal of establishing an enhanced, protected area for the West African Chimpanzee in Guinea, known as the Moyen-Bafing Offset Project.

On the 4 of May 2021, the president of the Republic of Guinea signed a decree establishing the Moyen-Bafing National Park, which is now a protected area of 6,767 km^2 hosting the largest continuous population of chimpanzees in West Africa. This decree has been a significant milestone for the Moyen-Bafing Offset Project, which is now afforded both national recognition and legal protection.

We made further progress in aligning EGA with the Environmental, Social and Governance standard for our industry, the Aluminium Performance Standards. In 2021, we certified our facilities in Jebel Ali. I am proud to say that all of EGA's smelting and casting facilities are now certified against the Aluminium Stewardship Initiative's Performance Standard.

Abdulnasser Bin Kalban
Chief Executive Officer

CelestiAL

The first company in the world to produce aluminium commercially using solar power

NET ZERO
GREENHOUSE GAS EMISSIONS

Committed to
Net Zero
GHG emissions

net zero by 2050
roadmap developed

asi Aluminium Stewardship Initiative

100%

of EGA's smelting and casting operations certified against the ASI Performance Standard

Zero

occupational health and safety related fatalities among employees or contractors at our operations

24%

reduction in NO_x emissions intensity from power operations in the UAE

29.80%

decrease in total recordable injury frequency rate among our operations in the UAE

11.29%

reduction in SO_2 emissions intensity from our smelting operations

53.73%

increase in recycling for UAE operations

1.48%

reduction in GHG emissions intensity from smelting and casting operations

12.5%

decrease in fresh water consumption at our Guinea operations

2.69%

decrease in energy intensity associated with metal production

14.29%

decrease in energy intensity associated with bauxite mining

17%

of supervisory and management roles held by women across all our operations

83%

of our employees in Guinea are Guinean nationals

USD **2.68** million

spent on community investments

1,500+

students participated in online educational events in the UAE

3,300+

people engaged through community engagement forums

USD **1.9** billion

spent on local procurement, equivalent to 40% of our total spend

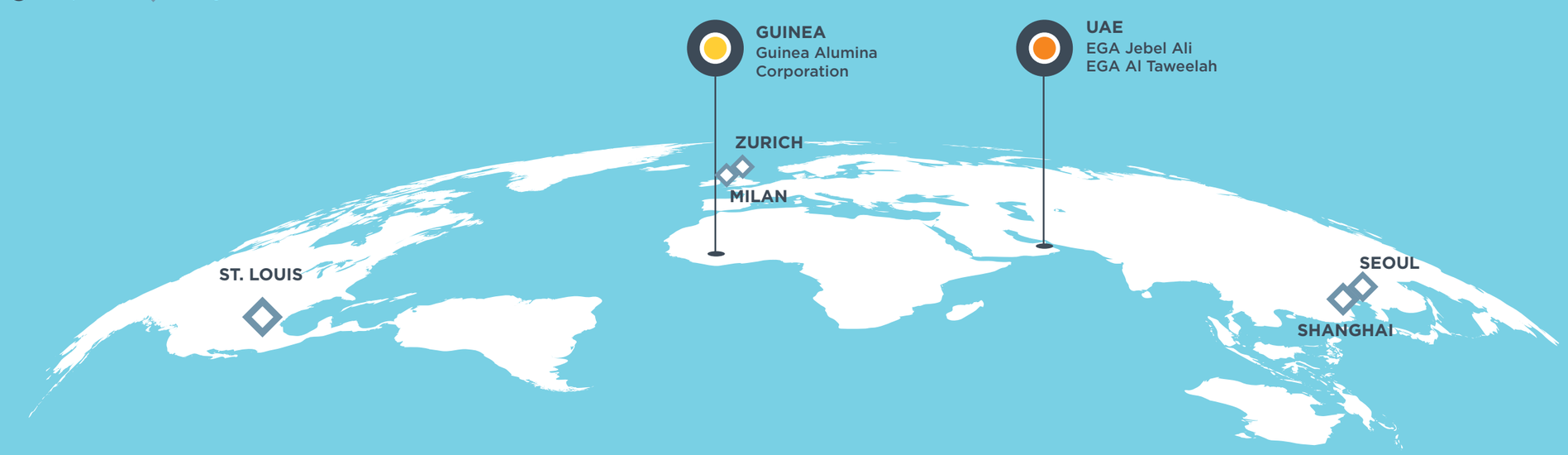
About Emirates Global Aluminium

Emirates Global Aluminium is the world's largest 'premium aluminium' producer.

EGA was formed in 2014 through the merger of Emirates Aluminium and Dubai Aluminium, and our history stretches back to the 1970s when Dubai Aluminium was founded. Headquartered in the UAE, we are owned equally by Mubadala Investment Company of Abu Dhabi and Investment Corporation of Dubai.

EGA operates two smelters in the UAE, one in Abu Dhabi and one in Dubai. Each has its own anode production facilities, casthouses and captive power plant. The smelters are also connected to the grid, enabling access to solar energy. In addition, we operate an alumina refinery in Abu Dhabi and a bauxite mine in Guinea.

Where we are located



Guinea Alumina Corporation (GAC)

Bauxite mine and export facilities

- 12 million tonnes of bauxite exported in 2021
- Includes mine, rail infrastructure (much shared with other operators) and export port
- One of the largest greenfield investments in Guinea in the last 40 years

Jebel Ali

Smelting, casting, anode production, power and water

- Commissioned in 1979, with eight separate expansions since then
- 1,577 reduction cells in seven potlines
- 12 casting stations producing more than 1.1 million tonnes of aluminium
- 2,974MW natural gas power plant
- 30 million gallons per day capacity desalination plant

Al Taweelah

Al Taweelah alumina refinery

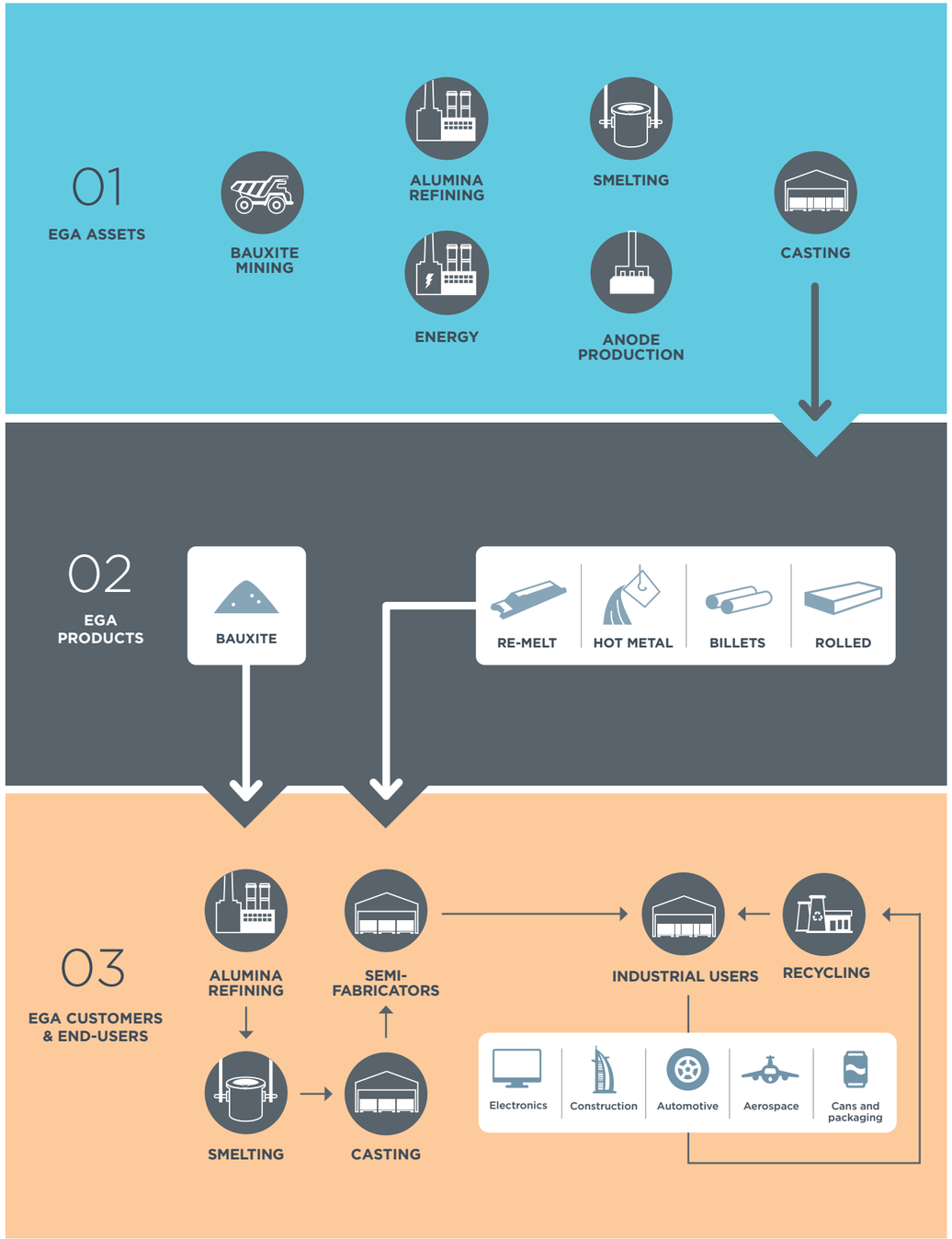
- A USD 3.3 billion development making alumina refining a new industrial activity for the UAE
- 2.36 million tonnes of alumina produced in 2021, exceeding name plate capacity in the second full year of operation, enough to meet 40 per cent of EGA's alumina requirements replacing some imports[5]

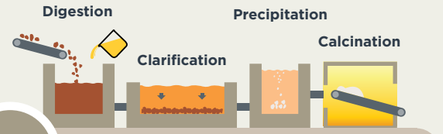
Smelting, casting, anode production, power and water

- Commissioned in 2009, second phase in 2013
- 1,266 reduction cells in three potlines
- Nine casting stations producing more than 1.5 million tonnes of aluminium
- 3,500MW natural gas power plant
- 3.75 million gallons per day capacity desalination plant
- Site includes our head office
- In 2019, Al Taweelah became the first facility in the Middle East to be certified to the ASI Performance Standard

[5] Nameplate capacity is the intended full-load sustained output of the refinery.

EGA's role in the aluminium value chain





02 Alumina refining

Bauxite is refined into alumina using the Bayer process. Two to three tonnes of bauxite are required to produce one tonne of alumina. In the digestion stage, hot caustic soda is added to the bauxite to dissolve the aluminium-bearing minerals in the bauxite. Clarification separates bauxite solids from the pregnant liquor via sedimentations. In the precipitation stage, aluminium crystals are recovered from the liquor by crystallisation. Calcination is a roasting process to remove remaining water.

01 Bauxite mining

The aluminium production process starts with the mining of bauxite ore. Layers of bauxite are typically found near the surface, so it is generally extracted through open cast mining. Around 90 per cent of the world's bauxite resources are in tropical and sub-tropical regions.

03 Aluminium smelting

A significant amount of energy is required to break the chemical bond between aluminium and oxygen in alumina. It takes approximately two tonnes of alumina to produce one tonne of aluminium. In 2021, EGA used 4.83 million tonnes of alumina to produce 2.58 million tonnes of aluminium.

04 Casting

Aluminium is then transferred to the casthouse, where it is made into products using several different methods. Alloys are added in many of our products, according to customer specifications, before the solidification stage.

In **re-melt casting,** liquid aluminium at a temperature over 700°C, is poured into moulds. The moulds are cooled and the aluminium solidified before being packed and shipped to the customer.

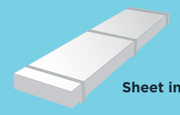
Re-melt purity products

Standard ingots | T-ingots | Standard profile sow ingots | High profile sow ingots | Low profile sow ingots

Re-melt foundry products

Standard ingots | T-ingots | B-ingots | HDC small ingots | Properzi ingots

In **sheet ingot casting,** cast aluminium slabs are either: heated and passed through a sequence of rollers until either the required plate thickness is obtained or until the metal is thin enough for cold rolling; or cut into plates.



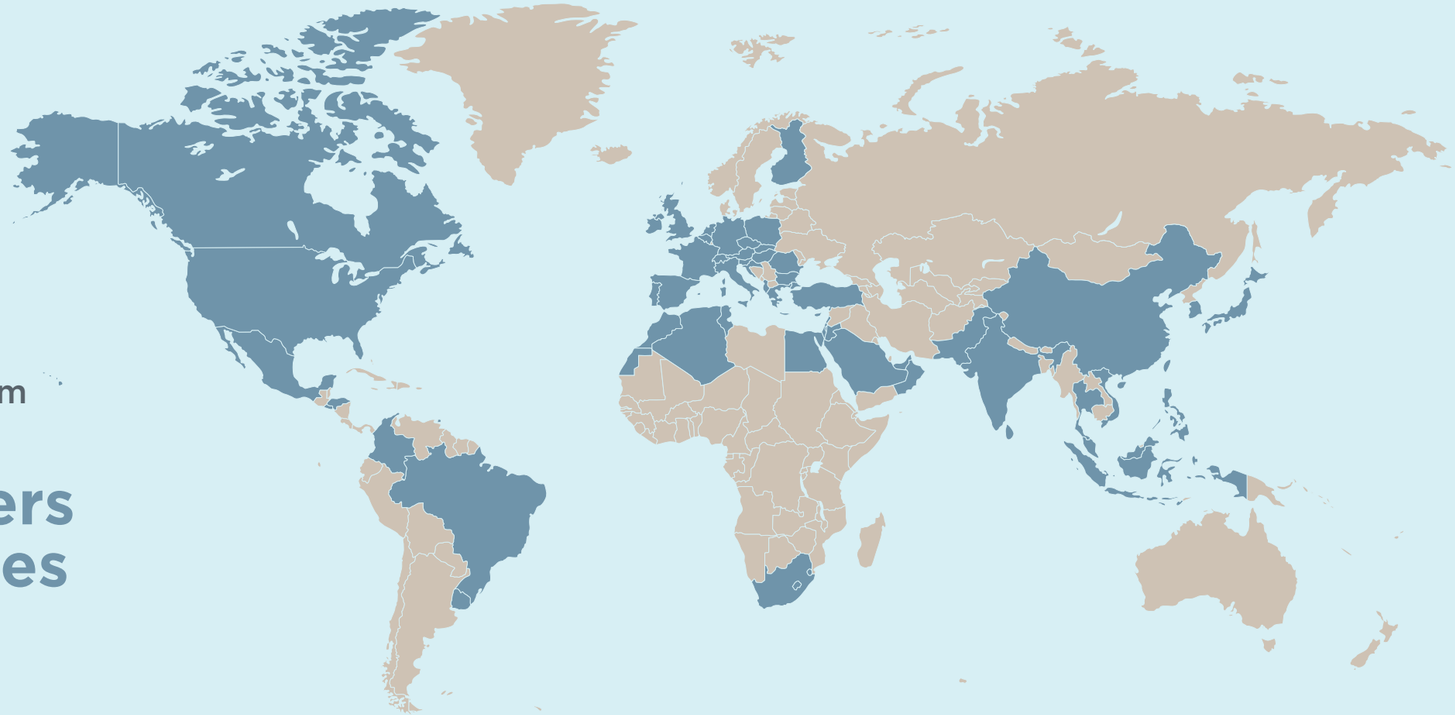
Sheet ingots

In **billet casting,** cast aluminium billets are heated and either: forced through a steel dye by the extrusion process producing profiles; or forged, producing different products such as wheels and automotive parts.

Billets

EGA also supplies **molten metal** to nearby customers. Receiving aluminium in molten form eliminates the need to use high energy to re-melt it before use. We transfer molten metal by truck in preheated 14.5 tonnes crucibles which can keep the metal liquid for up to 18 hours at temperatures of around 780°C.

Hot metal transfer



EGA's primary aluminium was shipped to

444 customers in 58 countries

around the world

2021 metal production	
CAST METAL PRODUCED (million tonnes)	2.58
VALUE ADDED PRODUCTS	84%
AVERAGE PURITY RATING	99.86%
2021 raw material production	
ALUMINA PRODUCED (million tonnes)	2.36
BAUXITE EXPORTED (million tonnes)	12

2021 was a year of change for the aluminium industry, with demand picking up exceptionally fast as the world rebounded from COVID-19. Despite a severely disrupted global supply chain due to shipping shortages, we focused on nurturing our long-term mutually-beneficial relationships with customers, making 2021 an outstanding success.

EGA supplied primary aluminium to 444 customers in 58 countries in 2021, producing 2.58 million tonnes of cast metal.

At EGA's wholly-owned bauxite mining and export subsidiary in Guinea, we marked the 100th shipload of bauxite exported from Guinea since start-up, a total of 12 million metric tonnes of bauxite ore. This made EGA one of the largest bauxite suppliers in the world to the third-party market, exporting to Asia, Europe and the UAE.

> **As we look beyond the pandemic, the global industry is placing further importance on environmental and social topics, setting the direction for the industry's future.**

Adel Abubakar
Chief Marketing Officer

Our Al Taweelah alumina refinery exceeded its nameplate capacity by almost 15 per cent, delivering 2.36 million tonnes of alumina to EGA's smelters.

During 2021, we maintained our status as a world leader in the production of 'premium aluminium', known in our industry as value-added products.

'Premium aluminium' includes ingots, billets and sheets that have been alloyed or enhanced, or are of a very high purity. We create these products to customer specifications for use in the automotive, aerospace, electronics, packaging and construction industries.

EGA's customers also benefit from our technical expertise, as we help customers determine which specifications and alloys can maximise the cost and performance efficiencies of intended applications.

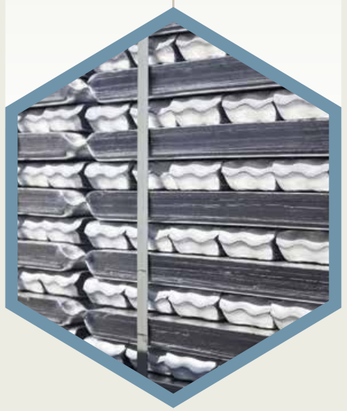
In 2021, BMW Group became our first customer for EGA's CelestiAL solar aluminium. EGA has supplied metal to BMW Group since 2013 for use in the German carmaker's engines and other parts. Using solar aluminium from EGA will reduce BMW Group's emissions by 222,000 tonnes of CO_2e per year. EGA's CelestiAL metal covers almost half the annual requirements of Plant Landshut, the BMW Group's only production facility for light metal casting in Europe.

Bauxite ore

Bauxite is the ore from which aluminium is derived and is refined into alumina, the feedstock for aluminium smelters. GAC's bauxite has one of the highest ratios of alumina to silica, as well as relatively low boehmite. These properties make it suitable for processing in a wide range of refinery operating conditions, from low to high temperatures as well as double-digestion refineries at comparably low operating costs.

Re-melt aluminium

EGA primarily supplies high-purity and foundry-remelt products to manufacturers in the aerospace, automotive and electronics industries.



Rolled products

For the packaging and printing industries, we produce rolled products as sheet ingots, which are used to make foil and lithographic printing plates. The automotive industry also uses EGA's lightweight aluminium sheet ingots to manufacture vehicles that weigh less and are therefore more fuel-efficient.

Billets

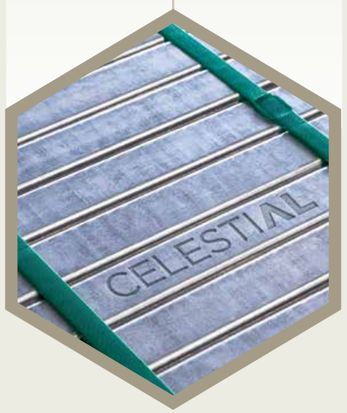
EGA supplies billets to end-users in industries including transportation and automotive, construction, engineering and consumer durables.

Molten metal

EGA delivers molten metal to nearby customers including Ducab Aluminium Company in Khalifa Industrial Zone Abu Dhabi (KIZAD). Molten metal is delivered in sealed trucks via a dedicated hot metal road. This direct delivery of molten metal eliminates the customers' need to re-melt the metal upon receipt from EGA, thereby significantly reducing customers' energy consumption and associated emissions.

Low carbon aluminium

EGA supplies low carbon aluminium produced by the acquisition of solar power derived from the desert sun of the UAE[6].



[6] Solar power is transmitted to EGA via Dubai's electricity grid and is tracked and traced through the use of the International Renewable Energy Certification system.

Our purpose, mission and values

In 2021, we launched our newly-defined purpose, mission and values, a series of simple yet profound statements about why we exist, where we are going, and how we will get there.

This was an important milestone for our company, offering an opportunity to reflect on what we have always stood for, and what we aspire to become. In setting the new purpose, mission and values for our organisation, we knew it was important to integrate the ideas and aspirations of those who know EGA best. We therefore sought input from everyone working at EGA, as well as some of our most important customers and other external stakeholders. Almost everyone at EGA participated through a series of surveys, open feedback sessions and interviews.

This process took some six months, and started with the EGA People Survey in 2020, which helped us understand how best to shape EGA's organisational culture and our aspirations for the future.

Our values were chosen by our employees, and reflect what we collectively consider to be the cultural recipe we require for success. Some of our values are existing strengths of our organisation, while others are strengths we must build.

To help us embed our new purpose, mission and values throughout EGA, 175 colleagues were chosen by their peers as the most socially-influential within the company, and formed the Najah Network. The role of this network is to build a bridge between frontline employees and EGA's leadership, and present a clear picture of how EGA's cultural transformation is progressing in all corners of the organisation. They also act as role models, living EGA's values and helping their colleagues to understand them.

EGA's new-defined purpose, mission and values have been built from the most extensive set of employee engagement data we have ever had

Employees who took the EGA/GAC People Survey	6,600+
Employees who took the aspired culture survey	2,400+
Employees who participated in focus groups	450+
Leaders interviewed including ExCo and Youth Council	30+

Memberships

- Aluminium Stewardship Initiative
- International Aluminium Institute
- Gulf Aluminium Council
- Emirates Environmental Group
- Dubai Quality Group
- Middle East Public Relations Association
- US-UAE Business Council

Our mission

To generate value from mining to metal

Our purpose

Together, innovating aluminium to make modern life possible

Our values

EGA's values define how we work together

Our values will help us respond to and navigate change. They provide us with a set of reference points that we can always revisit to ensure that no matter the challenge we face, we are always true to what we value most.

What do the words mean?

Together
Our success depends on the skills and commitment of each of us.

Innovating
We continuously improve our business and operations and are at the forefront of innovation.

Aluminium
We are engaged in the aluminium value chain, from bauxite mining to cast metal.

Make modern life possible
We make modern life possible with our metal, our contribution to prosperity development, the opportunities we create for people, our knowledge, our responsibility and our commercial success.

Safety & sustainability
We always put safety first. We care for our people, our workplace, our communities and our planet.

Integrity & fairness
We act with integrity and fairness with our stakeholders and each other at all times.

Ownership & teamwork
We deliver results through personal ownership, and effective team collaboration.

Innovation & continuous improvement
We create value through innovation and continuously improve our business, our operations and ourselves.

Our sustainability approach

We care for our people, our workplace, our communities and our planet.

At EGA, ensuring the well-being of people, respecting the communities we are a part of and managing our potential environmental impacts have always been an integral part of our DNA. We now make this commitment clearer than ever with safety and sustainability being established among the qualities that we value the most within our new purpose, mission and values. Future decision making at EGA will be guided by our values and all at EGA are expected to consider that in undertaking our business, we must always care for our people, our workplace, our communities and our planet.

Safety and sustainability

Our new bold aspirations

asi MEMBER

By 2030

Produce only ASI Certified products

NET ZERO GREENHOUSE GAS EMISSIONS

By 2050

Net Zero Greenhouse Gas Emissions

Ensuring a holistic approach to sustainability

Aluminium has an essential role to play in our society's future. It is used in renewable energy solutions, improving transport and energy efficiency, increasing product longevity and reducing demand on natural resources.

Yet the production of aluminium is not without challenges, all of which require rigorous and in some cases innovative management for an aluminium producer to be a true contributor towards a sustainable society. These challenges include land-use change associated with mining activities, the production of high volumes of by-products during alumina refining, the energy intensity of the smelting process and the generation of industrial emissions, discharges and potentially hazardous wastes.

To ensure EGA is addressing all the relevant environmental, social and governance challenges of the industry, we have aligned our approach to sustainability management to standards developed specifically for our industry by the Aluminium Stewardship Initiative (ASI). Developed over more than a decade through multi-stakeholder engagement, the ASI Performance Standards represent a consensus on best practice for safeguarding the environment, social responsibility and good governance throughout the aluminium value chain.

Aligning with the ASI standards means that we are not only tackling sustainability topics we believe are important at EGA, it means we are also addressing sustainability topics that are identified as important by international civil society groups, the end users of aluminium and community representatives from around the world.

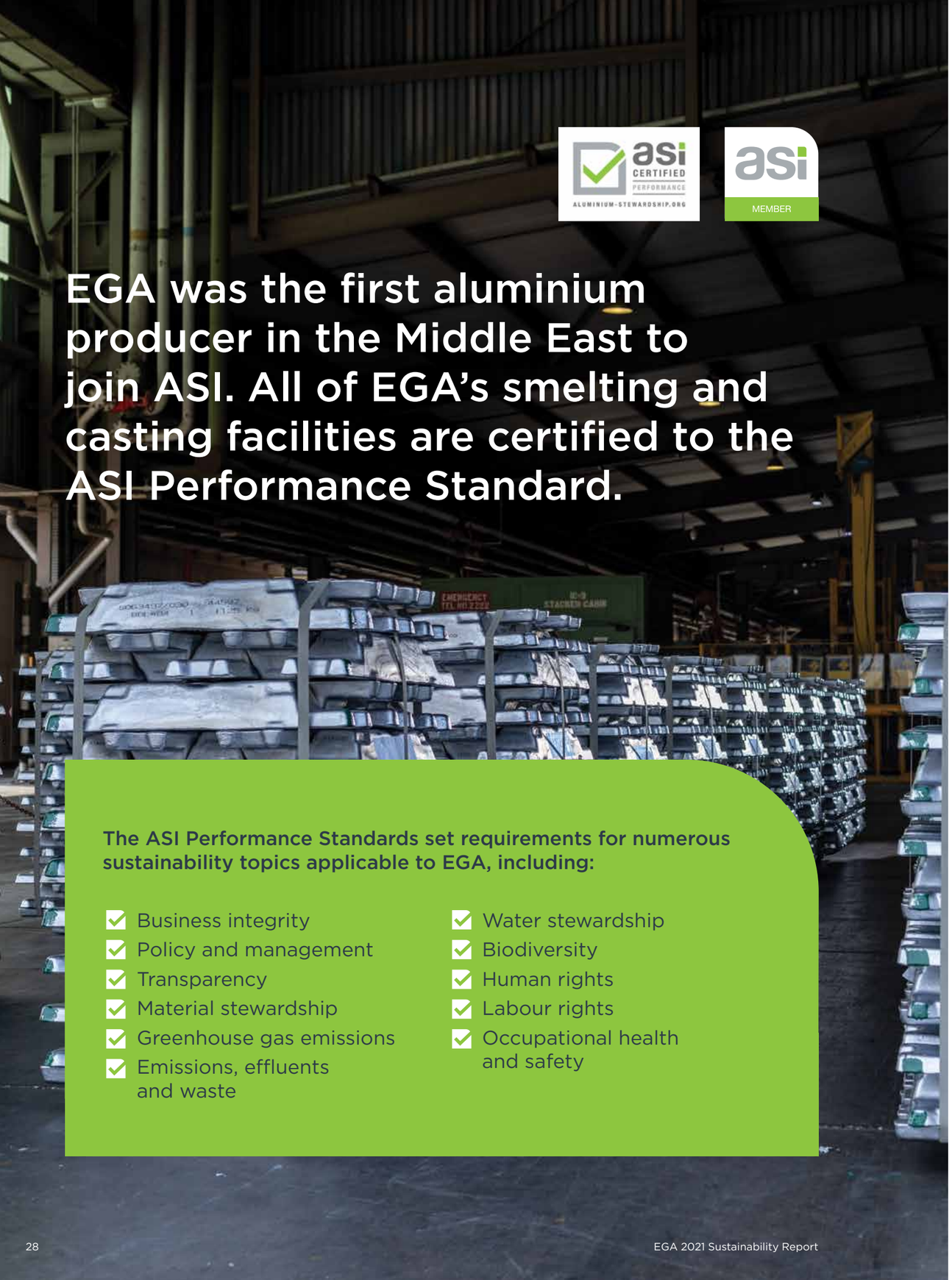
Aligning our approach to sustainability with the ASI Performance Standards means conducting our business with a high level of integrity and ensuring we have effective policies and procedures in place to support the sound management of environmental, social and governance issues. It includes being transparent and reporting on our sustainability performance in accordance with internationally recognised standards. It means taking a life cycle perspective and promoting resource efficiency. It includes radically reducing our greenhouse gas emissions to mitigate their impact on the global climate as well as minimising emissions and effluents that have the potential to impact human health and the environment.

In 2017, EGA was the first organisation in the Middle East to become a member of ASI. In 2019, EGA became the first organisation in the Middle East to achieve a facility-level certification to the ASI Performance Standards, successfully attaining certification for our smelting and casting facilities in Al Taweelah. In 2021, we also received ASI certification for our smelting and casting facilities in Jebel Ali meaning that now, all EGA's smelting and casting facilities are ASI certified.

Also in 2021, as part of our new purpose, mission and values, we set our ourselves the target of producing only ASI certified products by 2030. This will mean not only aligning our own operations with the ASI standards, but also working with our supply chain partners to help them align with the environmental, social and governance requirements of the ASI standards.

> We are immensely proud that all of our smelting and casting facilities are certified against the ASI Performance Standards. Our long-term goal is to certify all our operational facilities against this global standard and to supply the world with aluminium our customers are assured is responsibly produced.

Steven Bater
Manager - Sustainability



EGA was the first aluminium producer in the Middle East to join ASI. All of EGA's smelting and casting facilities are certified to the ASI Performance Standard.

The ASI Performance Standards set requirements for numerous sustainability topics applicable to EGA, including:

- Business integrity
- Policy and management
- Transparency
- Material stewardship
- Greenhouse gas emissions
- Emissions, effluents and waste
- Water stewardship
- Biodiversity
- Human rights
- Labour rights
- Occupational health and safety

A transition to net zero

In order to avert the worst impacts of climate change, it is imperative that collectively, we all work to limit our planet's warming to less than 1.5 degrees Celsius. In order to make this a reality, the world needs to achieve net zero GHG emissions to the atmosphere by mid-century. At present, the global aluminium industry accounts for approximately 2 per cent of the world's GHG emissions and must do its part to avoid climate catastrophe.

In 2021, EGA developed a roadmap to reach net zero emissions by 2050, engaging with both internal and external engineers, technologists and economists to ensure that what we are planning for the short, medium and long term can be technically and commercially viable.

Our roadmap addresses our emissions from all areas of our organisation including power generation, smelting, casting, refining, mining, supply chain and also considers the role of recycled aluminium and nature-based sequestration solutions.

> "Not all the required technological solutions exist today for the aluminium industry to fully decarbonise. But, at EGA we have more than 25 years of technology development experience that we can draw on to help meet this challenge."

Salman Abdulla
Executive Vice President
Health, Safety, Sustainability, Environment, Quality and Business Transformation

Key aspects of our Net Zero Roadmap

Bauxite mining

EGA's bauxite mining subsidiary Guinea Alumina Corporation generates the electricity it needs from two small diesel-fired package power plants. GAC is reviewing other potential electricity sources including solar and hydroelectricity, as well as how to reduce its energy needs. Mobile mining equipment at GAC is diesel-powered. GAC is exploring light vehicle electrification and the adoption of biofuels for heavy equipment.

Electricity generation

EGA has already announced an initiative with Abu Dhabi National Energy Company PJSC (TAQA), Dubal Holding and Emirates Water and Electricity Company (EWEC) under which EGA would divest its electricity generation assets and source power from the grid, including an increasing proportion of renewable and low carbon energy. In 2021, EGA became the first company in the world to produce aluminium commercially using solar power.

Alumina refining

Refining alumina requires thermal energy in the form of steam. EGA currently uses natural gas turbines to produce electricity and steam. Potential solutions include the electrification of boilers combined with renewable energy sources, solar thermal boilers, or the use of 'green' hydrogen to meet thermal needs. The UAE is expected to be globally-competitive in 'green' hydrogen given its geographic comparative advantages in solar power development and the existing export infrastructure in the country.

Smelting

The Hall-Héroult process, which has been used to make almost all the world's aluminium for more than a century, involves the consumption of carbon anodes resulting in emissions of carbon dioxide and perfluorocarbons. Although novel smelting technologies have been invented, there remain technical and commercial challenges to overcome before they become commonplace. These potential solutions or others could be further developed in the years ahead. Baking kilns used to manufacture anodes currently utilise thermal energy derived from natural gas. For these thermal energy needs, replacing natural gas with 'green' hydrogen is seen as the way forward.

Casting

Natural gas is currently used to heat furnaces in EGA's casthouses, which could be replaced with 'green' hydrogen.

Recycling

In addition, EGA expects to grow its business in recycling. As demand for aluminium is expected to grow by between 50 per cent and 80 per cent by 2050 according to the International Aluminium Institute, primary aluminium will still be required to meet demand well beyond mid-century. However, the role of recycled aluminium is expected to grow. EGA is planning to build the company's first recycling facility in the UAE, and production ramp-up could begin as early as 2024. EGA expects to explore further opportunities in recycling over the years ahead.

Supply chain

EGA's 2050 net zero commitment includes addressing emissions associated with the production of the goods and services that EGA procures. The most significant sources of emissions in EGA's supply chain are the production of raw materials such as alumina, as well as shipping. However, there are greenhouse gas emissions associated with almost all the goods and services EGA needs, from hand tools to business travel. EGA intends to work with existing and new suppliers to address these emissions, using its purchasing power to drive reductions.

Nature-based sequestration

While EGA's roadmap envisages a substantial reduction in EGA's greenhouse gas emissions, completely eliminating them may not be feasible, even beyond 2050. EGA has already started to develop a portfolio of nature-based sequestration projects for these unavoidable emissions and is exploring options including mangroves and sea grass in the UAE. As a global company, EGA could develop projects around the world, either alone or in partnership with others such as non-governmental organisations.

Aluminium from the desert sun

Aluminium production is energy-intensive with electricity generation accounting for more than 60 per cent of the global aluminium industry's greenhouse gas emissions. Across the world, much of this energy is derived from fossil fuels, with attributable greenhouse gas emissions, or hydropower which has the potential to be devastating for local natural ecosystems.

In 2021, we were successful with the world's first commercial production of aluminium using the power of the sun. We began production of this metal, which we market under the product brand, CelestiAL, in early 2021.

The sunny climate of the UAE and its extensive tracts of desert provide an excellent opportunity for large-scale development of solar power. The UAE receives very high average hours of sun per day, and there are minimal impacts from land use change compared to more temperate regions.

In 2021 we sourced 560,000 MWh of solar power[7] from the Mohammed bin Rashid Al Maktoum Solar Park through a partnership with the Dubai Electricity and Water Authority (DEWA) enabling us to produce more than 39,000 tonnes of CelestiAL. But this is just the beginning. The rapid expansion of both solar and nuclear energy in the UAE will provide EGA with a significant increase in production capacity for low carbon products and help us on our way to our net zero ambition.

[7] Solar power is transmitted to EGA via Dubai's electricity grid and is tracked and traced through the use of the International Renewable Energy Certification system.

Contribution to the United Nations Sustainable Development Goals

In 2015, the United Nations adopted the Sustainable Development Goals (SDGs) as a universal call to action to end poverty, protect the planet and ensure peace and prosperity for all. EGA contributes toward the SDGs relevant to our industry.

Ensure healthy lives and promote well-being for all at all ages

- We continue to provide healthcare for our employees. This includes offering medical insurance and operating clinics staffed by qualified doctors and nurses.
- We established COVID-19 testing facilities at our operational sites early in the pandemic and have continued to provide regular testing for both staff and contractors. By the end of 2021, we had conducted over 300,000 tests. In the UAE, we were also able to administer more than 20,000 COVID-19 vaccinations from our on-site medical centres.
- In 2021, we provided 1,636 medical check-ups to employees and contractors. We also provided 76,000 hydration tests to ensure people working on our sites remained suitably hydrated.
- Mindful of the pandemic's toll on mental health, we continued our comprehensive mental well-being campaign from 2020, including a series of webinars, e-learning activities and videos to complement our long-standing Employee Assistance Programme.
- In 2021, we ran a number of health awareness campaigns including Malaria prevention in Guinea for our employees, contractors and members of the local community. GAC has a comprehensive control programme to address the risk of malaria including mosquito fogging, larviciding, standing water prevention as well as the provision of mosquito nets and awareness programmes.

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

- Education is a key focus for our community engagement and development projects. We also offer a variety of training and development programmes to thousands of our employees every year to help people reach their full potential.
- We also contributed towards an advanced automotive training centre in the town of Boké. The centre will support local Guineans seeking a future career in mechanics.
- Also in Guinea, we continued with our long-running support of the Belikindi youth cooperative, which in 2021 trained a further 32 people in modern sewing techniques for the production of personal protective equipment (PPE) used in the mining industry.
- Also in 2021, we provided scholarships to 75 students in UAE.

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

- EGA has played an important role in the economic development of the UAE for decades. We directly employ over 6,500 people. Our aluminium is one of the UAE's biggest exports.
- Our goal is to attract and retain top talent by offering competitive salaries and benefits. We want to provide high-quality recruits with growth opportunities and provide them with a positive work environment to retain talented employees for the long-term.
- We also prioritise the local sourcing of goods and services in an effort to boost local economies. Our 2021 spend included USD 1.9 billion on local suppliers.

Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

- EGA's in-house research and development (R&D) department has an established track record of increasing productivity, reducing costs, boosting resource efficiency and minimising environmental impact.
- R&D investment has been part of EGA's approach since we first started production, and we now benefit from more than a quarter century of grown innovation. Over the years, we have developed and industrialised eight reduction technologies and filed 35 patents related to aluminium smelting enhancements with three new patents filed in 2021.

Ensure sustainable consumption and production patterns

- EGA is also at the forefront of exploring the technical and commercial viability of transforming significant waste streams from the aluminium sector into useful products for other industries.
- In 2021, we provided 46,248 tonnes of spent pot lining waste for use as a raw material by the UAE cement industry, equating to 92 per cent of our total in-year generation.
- EGA has a dedicated R&D group tasked with identifying ways of converting bauxite residue waste material into useful products, reducing or eliminating the need for storage and unlocking bauxite residue as a new material resource for the UAE.

Take urgent action to combat climate change and its impacts

- In 2021, EGA developed a roadmap to reach net zero emissions by 2050, engaging with both internal and external engineers, technologists and economists to ensure that what we are planning for the short, medium and long term can be technically and commercially viable.
- Our roadmap addresses our emissions from all aspects of our organisation including power generation, smelting, casting, refining, mining, supply chain and also considers the role of recycled aluminium and nature-based sequestration solutions.
- Also in 2021, we completed an initial climate change study to understand potential current and potential future climate risks for our operations in the UAE and Guinea as well as any potential knock-on effects for nearby communities or local environment.

Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

- In Guinea, we have continued our conservation work and our commitment to work towards no net loss for biodiversity with a positive gain for critical habitats.
- In 2021, we were able to continue the remediation of several areas that were cleared of vegetation as part of the construction phase, restoring land coverage of 78,000m^2 using species of local provenance grown in our own nursery.
- Also in 2021, we continued our conservation efforts associated with the critically endangered hawksbill turtle that nest at the shoreline adjacent to our facility in Al Taweelah in the UAE and supported the development of new areas of mangrove forest in collaboration with the One Billion Tree-Planting Initiate and Emirates Marine Environmental Group.

Strengthen the means of implementation and revitalise the global partnership for sustainable development

- We regularly collaborate with established academic and industrial institutions in the UAE and internationally to address key industry challenges, and problem solve sustainable solutions for the aluminium industry.
- EGA has also been involved in multi-stakeholder engagement processes looking into the future development and proposed updates to the ASI Performance Standards.

Economic value generated and distributed

EGA has played an important role in the economic development of the UAE for decades. Our aluminium is one of UAE's biggest exports and we directly employ over 6,500 people. We were also the first industrial company in the UAE to license its core process technology internationally, in a national step forward for creating value from knowledge.

We are also a significant contributor to economic development in Guinea. The development of GAC was one of the largest greenfield investments in the country in the past four decades. To date, from health awareness programmes to vocational training projects, we have invested more than USD 15 million in community initiatives in Guinea.[8]

In 2021, as economies recovered from COVID-19, our solid operational performance, coupled with a high London Metal Exchange price for aluminium resulted in EGA achieving its strongest-ever financial performance.

Our 2021 revenue was AED 25.5 billion (USD 6.9 billion), an increase of 36.1 per cent compared with the previous year.

Revenue of
USD 6.9 billion

Figure 1: Direct economic value generated

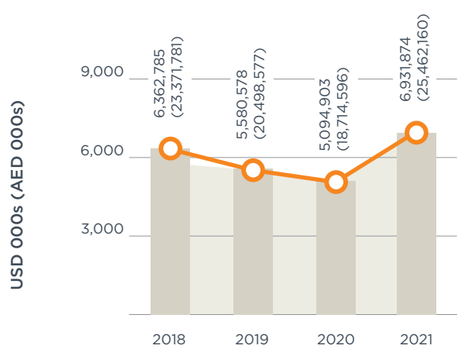
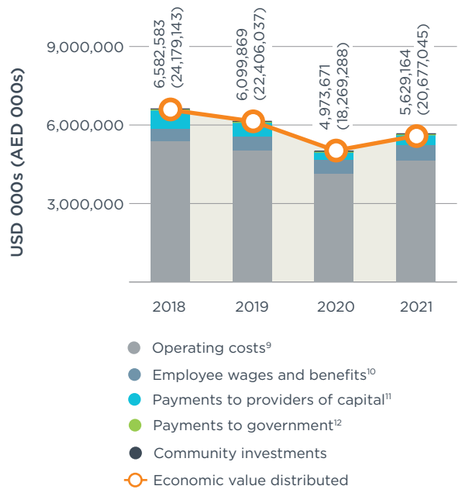


Figure 2: Economic value distributed

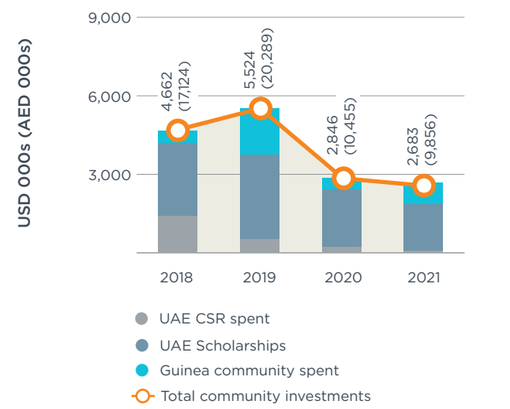


[8] In our 2020 report, we reported that since starting work in Guinea, our community investment totalled USD 54 million due to an administrative error.
[9] Operating costs include cost of goods sold, sales and distribution costs and general and admin expenses.
[10] Employee wages and benefits comprise the total costs for EGA employees and staff directly contracted by EGA.
[11] Payments to providers of capital are the payments made to EGA shareholders and lenders.
[12] Payments to government are tax expenses/returns paid by EGA's international subsidiaries.

We operate planned and targeted community investment programmes for all of our sites in both the UAE and Guinea. We work with numerous stakeholders, including community representatives, non-governmental organisations, educational institutions and the respective governments. We believe that the best way to maximise our positive impact is through grassroots community engagement initiatives that increase economic opportunity, enhance opportunities for education and ultimately improve quality of life.

Further details regarding our community initiatives are provided within section 3 'Social Responsibility'.

Figure 3: Breakdown of community investments



Our material topics

Sustainability covers a broad range of topics. Identifying what should be reported and to what extent is an important component of the sustainability reporting process.

At EGA we adopt the Global Reporting Initiative's materiality principle whereby no one decision-maker or department decides on appropriate report content. Every year we engage with a broad range of internal and external stakeholders to help identify what we and the organisations we work with consider to be the most relevant sustainability topics for EGA.

In 2021, to help inform our reporting process, we conducted a stakeholder engagement exercise asking our stakeholders to rank 19 sustainability topics. The purpose of this exercise was to identify topics that were perceived by our stakeholders as having the most significant impacts and that also substantively influenced assessment and decision-making.

These 19 topics were selected to ensure coverage of all sustainability-related issues included in the Global Reporting Initiative, with the exception of 'Customer Privacy'13[13].

We also added two additional topics relevant to our industry, namely:

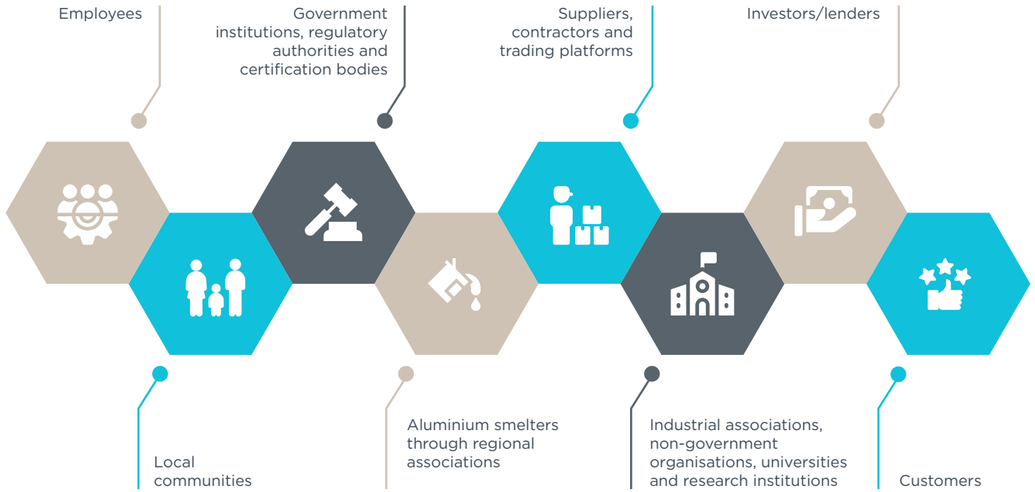
- **Technology and innovation** – given the role that technological development and innovation plays in energy efficiency, environmental preservation and climate change mitigation.
- **Our metal** – given the importance of the quality, reliability and credentials of our end product for the long-term success of our organisation.

Internal stakeholders consulted included key decision-makers and influencers within EGA. External stakeholders included international and local customers, government agencies, local communities, NGOs, industrial associations, certification bodies and suppliers.

In 2021 we engaged with a total of 192 stakeholders.

[13] EGA is not an organisation involved in the handling of large volumes of private customer data as might be the case for a bank or telecommunications firm.

Our stakeholders



Results of the materiality analysis

The scores of respondents for each of the 19 topics were averaged and plotted as a 'materiality matrix'. Internal stakeholder results were plotted against the x-axis; external stakeholder results were plotted against the y-axis.

Materiality matrix[14]

While all 19 topics are considered important from the perspective of EGA's long-term sustainability performance, all topics scoring above the median value on both the x and y-axis were considered the 'most material' for 2021.

For each of the topics considered 'most material' we have fully disclosed our management approach and provided Global Reporting Initiative topic-specific disclosures.

[14] For comparison against previous years material topics, please refer to our published 2020 report available at https://www.ega.ae/media/2617/ega-2020-sustainability-report.pdf

While the stakeholder engagement process allowed us to rank topics in terms of level of perceived materiality, it was clear from the scores that none of the topics were considered irrelevant to EGA's operations. We have therefore also provided disclosure on topics identified as very important or important with the level of detail provided in the disclosure determined by the level of importance attributed by our stakeholders.

Disclosure expectations specific to the aluminium industry are also identified by the ASI Performance Standards. These expectations have been defined through the multi-stakeholder development and public consultation process involved in the generation of the standards. Our 2021 report covers all ASI Performance Standards disclosure requirements for EGA's smelting and casting operations.

In 2021, we engaged with KPMG in order to perform independent, credible assurance and provide an objective and impartial opinion on the disclosures made within our report covering our three most material topics identified through materiality analysis as well as our disclosures concerning climate change[15]. This external review helps to ensure consistent, objective and accurate reporting of our sustainability performance.

[15] For further information, please refer to external assurance report (pages 136-137).

02

Safeguarding the environment

Safeguarding the environment

Our approach to environmental management

Mining and industrial processes have the potential to cause significant environmental consequences if not managed responsibly.

At EGA, activities with potential environmental impacts are overseen by a dedicated team of in-house environmental specialists. Working together, our environment and operations teams are responsible for managing all necessary controls, monitoring plans and audits as well as finding opportunities for continuous improvement.

Across all operations and project sites, EGA actively identifies potential environmental risks and suitable controls. Our management plans establish requirements for impact assessment, monitoring, suitable operating procedures, avoiding impacts and ensuring an appropriate level of mitigation where necessary.

Environmental management systems and performance standards

Aluminium Stewardship Initiative

- Jebel Ali smelting and casting
- Al Taweelah smelting and casting

ISO 14001:2015

- Jebel Ali smelting and casting
- Al Taweelah smelting and casting
- Al Taweelah alumina refinery project

IFC Performance Standards and World Bank Guidelines

- GAC bauxite mine and export facilities

In the UAE, all of our operational facilities are managed through our environmental management system that includes site-specific environmental management plans developed in accordance with regulatory requirements and technical guidelines issued by the relevant environmental regulators[16]. All of our facilities in the UAE are also frequently audited by representatives from environmental regulators and third parties to confirm the suitability of our environmental monitoring and controls.[17]

In 2021, our smelting and casting facilities in Jebel Ali were confirmed as meeting the environmental performance requirements of the ASI Performance Standards. Consequently, all of EGA's smelting and casting facilities are now certified against the ASI Performance Standards[18]. We aim to achieve this certification for all other operational facilities in the future.

In Guinea, during the design of our mine and export facilities, potential environmental impacts were identified through a detailed environmental and social impact assessment. This assessment was prepared in accordance with the International Finance Corporation's Performance Standards and the Equator Principles, the Integrated Safeguards System of the African Development Bank and regulatory requirements of the Guinean government.[19]

In Guinea, we have developed a site-specific social and environmental management system complemented by a series of detailed plans for air quality, biodiversity, dredging, noise control, soil management, water management, rehabilitation and reforestation. We have been operationalising our management system since the mine first begun commissioning in 2018.

An independent third party regularly monitors our activities in Guinea to ensure that we are fulfilling our commitments under the International Finance Corporation's Performance Standards and the Equator Principles.

[16] Including federal and emirate level authorities
[17] Including ISO, ASI and OESMP audits
[18] Al Taweelah was first certified in 2019. ASI certificates and summary reports are available at https://aluminium-stewardship.org/about-asi/asi-members/emirates-global-aluminium-pjsc s/
[19] IFC assessment and mitigation commitments are made publicly available through disclosure on the International Finance Corporation website.

Protecting air quality

Power generation and the industrial processes associated with aluminium smelting can adversely impact air quality if not adequately managed. In the UAE, protecting air quality is a key focus area for our environmental management system. We monitor emissions and local ambient air quality to ensure the effectiveness of our controls and regularly communicate the results to relevant environmental regulators.

Potential air quality impacts from EGA's mining and export facilities in Guinea are predominantly associated with dust generation from the movement and the processing of large quantities of earth and rock, as well as emissions from mobile equipment and power generation. We have run simulated computer dispersion models to help us avoid potential local impacts associated with nitrogen oxide (NO_x) and sulphur oxide (SO_x) emissions, to identify suitable locations for air quality monitoring stations and to ensure controls for dust suppression are sufficient.

Nitrogen oxides from power production in the UAE

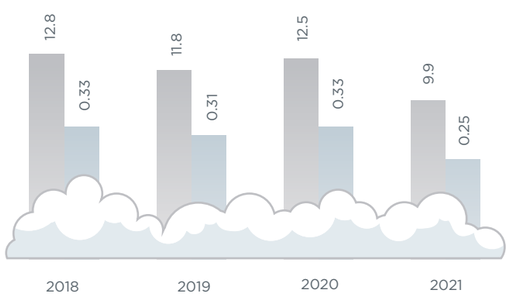
Exposed to high temperatures, nitrogen and oxygen react to produce NO_x. EGA's NO_x emissions are predominantly a result of the combustion of natural gas at our power stations.

In 2021, our NO_x emissions reduced by 20%

In 2021, our total 2021 NO_x emissions reduced by approximately 20 per cent when compared with 2020. This was primarily due to the commissioning of our new H-class power block at our facility in Jebel Ali, substituting several older, less efficient gas turbines[20]. This new Siemens SGT-8000H combined-cycle unit is the most efficient power block in the UAE and the first to serve the global aluminium industry.

In the past, reliance on older turbines at Jebel Ali prevented us from meeting the NO_x emissions thresholds set by the environmental regulator in Dubai[21]. Substituting older gas turbines with our far more efficient H-Class power block will enable us to operate well within regulatory thresholds.

Figure 4: NO_x emissions from power plant operations in UAE[22]



[20] Older, less efficient gas turbines have been taken offline and placed on emergency standby.
[21] We received a notice of violation from the environmental regulator in 2016 for gas turbines that were installed prior to the implementation of relevant emissions regulations in Dubai.
[22] Emissions data are direct readings from analysers or manual balance estimations. The total volume of NOx emissions depends predominantly on how much electricity we are generating to meet our requirements for aluminium production.

Sulphur dioxide from anode production and smelting in the UAE

The raw materials used to manufacture anodes used in the aluminium industry contain sulphur. As anodes are consumed at high temperatures during the reduction of alumina to form aluminium, sulphur reacts with oxygen to produce sulphur dioxide (SO_2). SO_2 is also produced given the high temperatures involved in the manufacture of anodes at our anode baking kilns.

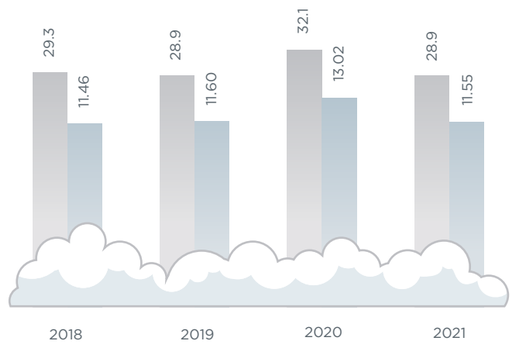
We control our SO_2 emissions through specifications set for the sulphur content of the raw materials we use in anode production. Also, an integral parameter of our smelting process is to minimise anode consumption during the electrolysis process. At our facility in Al Taweelah, we operate a wet scrubbing system at several potlines, able to remove up to 95 per cent of SO_2 from our emissions.[23]

In 2021, our SO_2 emissions reduced by 10%

In 2021, our total SO_2 emissions decreased by almost 10 per cent when compared with 2020. This was predominantly due to the reduced sulphur content in the raw materials used to manufacture anodes at our facility in Jebel Ali. We also made efficiency improvements to our wet scrubbing system in Al Taweelah.

Also in 2021, we continued with our rolling programme of major refurbishments at our anode baking kilns with planned completion in 2022. These refurbishments allow us to further improve our anode baking process and further control associated SO_2 emissions.

Figure 5: SO_2 emissions from anode production and smelting operations in UAE[24]



[23] In wet scrubbing systems, compounds are removed from a gas stream and transferred to a liquid, minimising emissions to the atmosphere.
[24] Emissions data are direct readings from analysers or manual balance estimations.

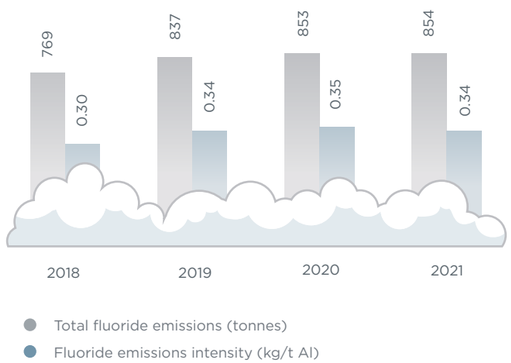
Fluoride emissions from smelting operations in the UAE

During the smelting process, it is important to get electrolyte chemistry just right. The aluminium industry uses cryolite-based electrolytes consisting of a fluoride salt to which it is necessary to add aluminium fluoride to maintain optimal chemistry and maximise resource efficiency. However, a consequence is the generation of fluoride emissions.

Emissions from our smelters are treated at a series of gas treatment facilities where we operate dry scrubbing systems[25] to remove fluorides. In 2021, the intensity of our fluoride emissions decreased by 2.8 per cent compared with 2020, attributable to increased efficiencies at some of our gas treatment facilities combined with some operational improvements at our smelters. However, our total fluoride emissions increased by 0.1 per cent compared with 2020 figures given the increase in total metal production compared with 2021. Nevertheless, our fluoride emissions at both Al Taweelah and Jebel Ali remained well within regulatory limits.

In addition to direct emissions monitoring for fluoride, we also regularly conduct continuous ambient air quality monitoring as well as vegetation material sampling in and around our smelting facilities to reaffirm the suitability of our monitoring efforts and control measures.

Figure 6: Total fluoride emissions from smelting operations in UAE[26]



Dust management from alumina refinery operations in the UAE

Bauxite is a relatively inert sedimentary rock that is refined to produce alumina. However, handling substantial volumes of dry bauxite can generate large quantities of airborne dust.

At EGA, we use numerous control measures to minimise the release of bauxite dust including automated dust suppression systems, covered conveyors and storage areas.

In 2019, during the commissioning and ramp-up of our new alumina refinery in Al Taweelah, we identified inefficiencies in our bauxite dust controls and there were instances when bauxite dust was released to the immediate area. In response, during 2020 and 2021 we upgraded our conveyor dust suppression systems and made changes to both our bauxite unloading area and the facade of our bauxite storage shed.

Air quality monitoring results for 2021 have confirmed that our new measures are proving successful, we will nevertheless continue to monitor the situation into 2022.

NO_x and SO_x emissions from mining operations in Guinea

In Guinea, our principal gaseous emissions are NO_x and SO_x associated with the use of diesel for power production, vehicles, and mining equipment.

As part of our impact assessment and management planning conducted for our mining operations, we have run simulated computer dispersion models to help us understand and avoid potential local impacts associated with vehicular emissions and to identify suitable locations for air quality monitoring stations.

During much of the construction phase of GAC, we were largely dependent on the use of diesel-powered mobile generators for the production of power. We have since commissioned two small diesel-powered package power plants, centralising the production of power and improving overall efficiency. Unfortunately, given continuing constraints linked to COVID-19, exacerbated by the remote location of our mining facilities, we have not yet been able to arrange stack emissions testing at our package power plants.

Dust management from mining operations in Guinea

During mining operations, the handling of large quantities of earth and the movement of heavy vehicles across exposed subsoils risk substantial dust generation.

For our operations in Guinea, we have a comprehensive dust suppression system that takes into account how we could potentially impact neighbouring communities and sensitive habitats, recognising the importance of addressing the risk of dust generation during the dry season.

The majority of our access routes are regularly sprayed with water to minimise dust generation from vehicle movements, we also operate dust suppression systems at our crushing and loading facilities.

In 2021, we continued to monitor the success of our dust suppression efforts through the use of mobile air quality monitoring equipment, taking readings from both within our operational areas and among local communities. We also trained several members of the local community on how to identify excessive dust generation associated with our activities and provided contact details such that community members could immediately report an incident to our environment team should they have any cause for concern.

Throughout 2021, we did not receive any complaints from any local community members regarding dust management.

[25] In our dry scrubbing system, we apply high volumes of powdered alumina to exhaust gases at extremely high speeds. The subsequent fluoride-enriched alumina can then be returned to the smelting process.
[26] Emissions data are derived from direct readings from a site analyser, laboratory analysis of manual stack sampling and/or mass balance estimations.

Conserving energy and enhancing yields

Home grown technology

The production of aluminium is an energy-intensive process. The chemical bond between aluminium and oxygen in alumina is very strong with a significant amount of energy being required to break this bond and produce aluminium.

Producing more aluminium with less energy is important from both a commercial and an environmental perspective and has been part of EGA's ethos since the foundation of our organisation more than 40 years ago.

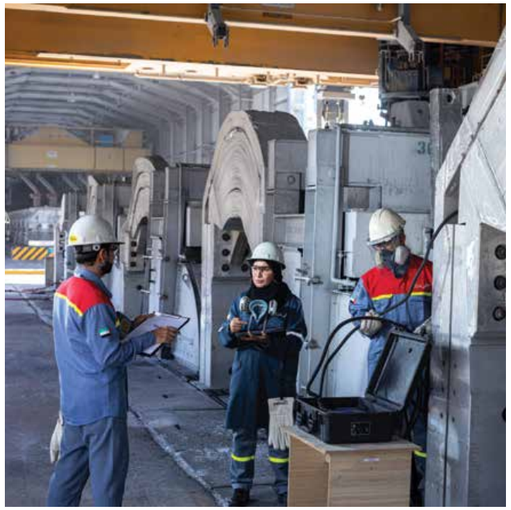
EGA's in-house research and development (R&D) department has an established track record of increasing yield, reducing costs, boosting resource efficiency and minimising environmental impact.

R&D investment has been part of EGA's approach for decades, and we now benefit from more than 25 years of home-grown improvements. Over the years, we have developed and industrialised eight reduction technologies and filed 35 patents related to aluminium smelting enhancements with three new patents filed in 2021.

Since 1990, EGA's technology development has more than doubled the size of reduction cell that is technically and commercially viable. Our technology development, and earlier work that started in the 1980s, has significantly reduced the amount of electricity required to produce aluminium, improving both cost and environmental performance.

Our latest industrialised technology, DX+ Ultra, has more than double the productivity of our first D18 technology developed in 1990.

In 2021, EGA's overall average energy intensity for smelting aluminium was only 13.77 kwh/kg. However, with our next generation future smelting technologies, we are hoping to be able to achieve an energy intensity value as low as 11.2 kwh/kg.



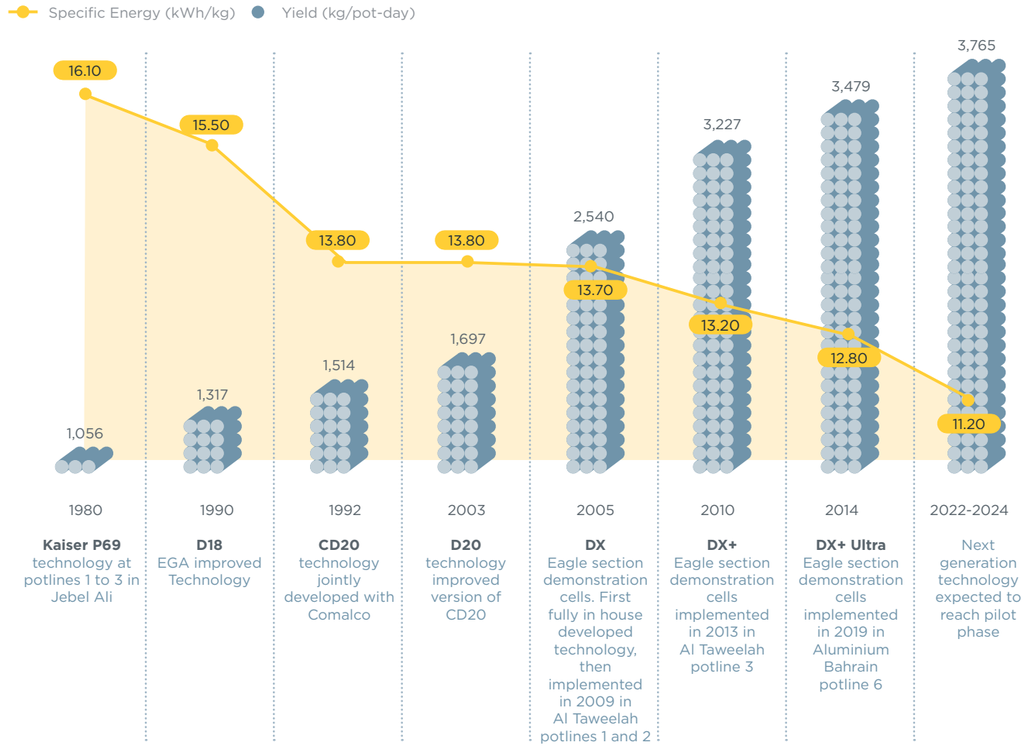
> At EGA we are committed to improving our environmental performance. The development of our in-house technology has greatly helped to improve overall environmental performance.

Milton Khan
Senior Supervisor – Environment & Waste Management

> I am proud to say our reduction technology is well known worldwide in our industry for its low implementation cost, high metal productivity, low energy consumption and low emissions.

Abdulaziz Sarhan
Manager - Technology Transfer

Figure 7: Evolution of technology - energy and production



Exporting energy-efficient technology solutions

EGA is the first UAE industrial company to ever license core process technology internationally. In 2016, Aluminium Bahrain (ALBA) selected EGA's DX+ Ultra technology for its expansion project set to produce more than 500,000 tonnes of aluminium a year.

EGA has also subsequently signed agreements with PT Indonesia Asahan Aluminium (Inalum) and NEO Aluminio Colombia to explore how EGA's home grown technology and know-how can help other organisations produce more aluminium with less energy. With these types of agreements, our aim is to promote in-country value, working with local businesses and industries to promote local know-how within the country and support the local economy, while generating revenue for EGA.

Given our successes to date, our long-term aspiration is to grow our technology development business, helping other organisations in the aluminium industry to reduce energy consumption, minimising greenhouse gas emissions while helping develop the UAE's knowledge-based economy.

Energy consumption in the UAE

In 2021, our total energy consumption in the UAE decreased by almost 0.5 per cent in comparison with 2020, attributable to several operational improvements.

This decrease in energy consumption translated to a reduction in our energy intensity of 2.69 per cent compared with 2020.

In 2021, our energy intensity for smelting and casting reduced by

2.69%

Figure 8: UAE energy consumption from non-renewable resources

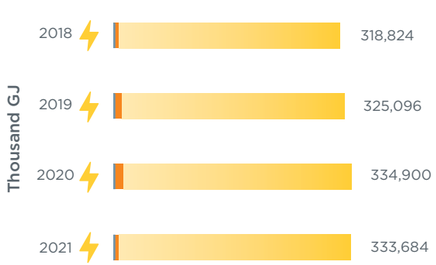
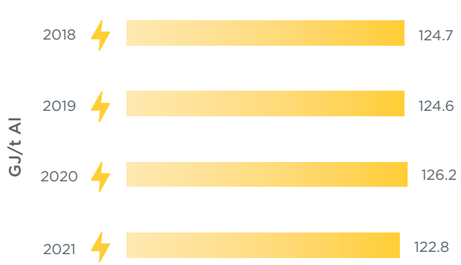


Figure 9: EGA smelting and casting energy intensity[27]



[27] Energy intensity is calculated taking into consideration fuel consumed during power generation including efficiencies and thermal loss.

Energy consumption in Guinea

In Guinea, the bulk of our energy consumption is associated with the use of site equipment, vehicles, the operation of our site offices and welfare facilities. Over the first three years of operation, our energy consumption in Guinea has shown a marked increase associated with our ramp-up in production from 1.7 million tonnes in 2019 to more than 16.2 million tonnes in 2021. Nevertheless, our energy intensity has decreased by approximately 14.29 per cent compared with 2020 as our operational systems mature and we explore opportunities for improved efficiency.

Figure 10: Guinea energy consumption from non-renewable resources[28]

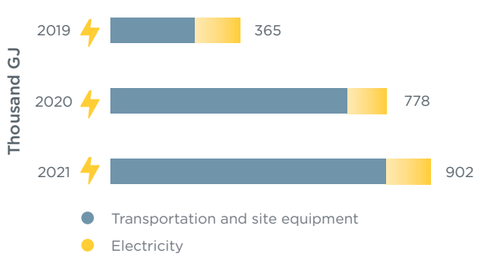
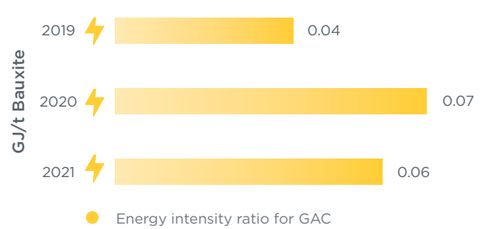


Figure 11: Guinea energy intensity



[28] Data provided since 2019 as this was the first year of operation.

Greenhouse gas emissions

Greenhouse gas emissions in the UAE

Carbon dioxide released to the atmosphere from fuel consumption at our natural gas power plants accounts for the majority of our greenhouse gas emissions. However, there are several other sources of greenhouse gas emissions associated with the production and consumption of anodes and the electrolysis process.

In 2021, our total scope 1 greenhouse gas emissions increased in part due to the increase in metal and alumina production compared with 2020[29]. We also encountered unplanned disruptions that resulted in an increase in emissions from the smelting process.

Perfluorocarbons (PFCs) are a group of potent greenhouse gases produced during the smelting process with a global warming potential thousands of times higher than CO_2. In 2021, the intensity of our PFC emissions increased by approximately 29 per cent compared with 2020. This was predominantly due to several anode quality concerns that affected voltage, with knock-on effects for gaseous emissions from the electrolyte. We also encountered power outage incidents, resulting in an increase in PFC emissions.

Our operational teams have worked to address the issue, identifying the cause for changes in anode quality, rectifying the problem and re-establishing voltage design parameters.

Despite the significant increase in PFC emissions, this only contributed 1.4 per cent of the total scope 1 emissions.

Also, EGA's PFC emissions are already significantly lower than the global average due to EGA's technology and operational controls. In 2021, our PFC emissions intensity was more than 85 per cent lower than the global industry average[30].

Our PFC emissions are 85% lower than the global industry average

Figure 12: Direct (scope 1) greenhouse gas emissions in UAE (thousand tonnes of CO_2e)[31]

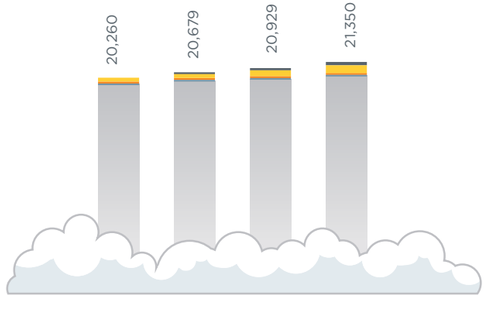
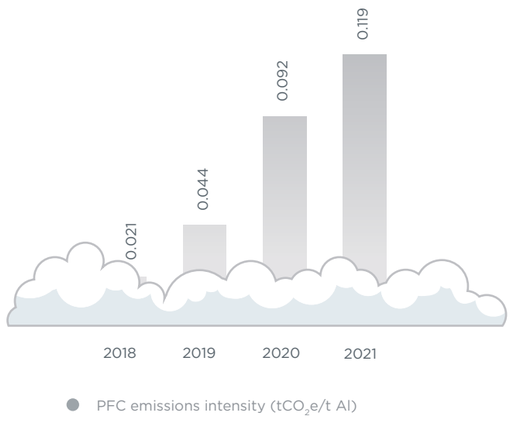


Figure 13: PFC emissions intensity



[29] In 2021, our metal production increased by 1.6 per cent and our alumina production increased by 22 per cent.
[30] IAI referenced for the global industry average as of 2019.
[31] Global Warming Potential (GWP) for CO_2, CH_4, and N_2O are based on the Intergovernmental Panel on Climate Change (IPCC) 2nd assessment report, 1996. Standards used for estimation are GHG Protocol (revised edition) developed by the World Resources Institute and World Business Council for Sustainable Development, the IAI addendum developed for the aluminium sector by the International Aluminium Institute (IAI, 2006) and the IPCC Guidelines.

As we generate our own power at each of our sites in the UAE, we produce little in the way of indirect (scope 2) emissions. However, we have historically been accountable for scope 2 emissions as a consequence of energy exchange agreements with the local electricity grid. In 2021, for the first time in our history, we were able to eliminate almost all of EGA's scope 2 emissions. The rapid and continued investment into low carbon energy sources in the UAE is now making it possible for EGA to source all our 2021 imported electricity from solar farms in the country[32].

The near elimination of our scope 2 emissions, in conjunction with the commissioning of our new H-class power block along with several operational efficiencies, resulted in a reduction in the GHG intensity of our metal of 1.48 per cent compared with 2020. However, given the growth in metal and alumina production in 2021 relative to 2020, our total greenhouse gas emissions in the UAE increased by approximately 1 per cent.

The GHG intensity (scope 1 and 2) of our metal remains significantly lower than most aluminium producers, being approximately 35 per cent lower than the published global industry average[34].

The GHG intensity of our metal is 35% lower than the global industry average

Figure 14: Indirect (scope 2) greenhouse gas emissions in UAE[33]

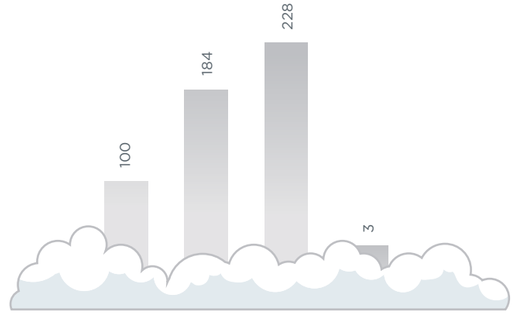
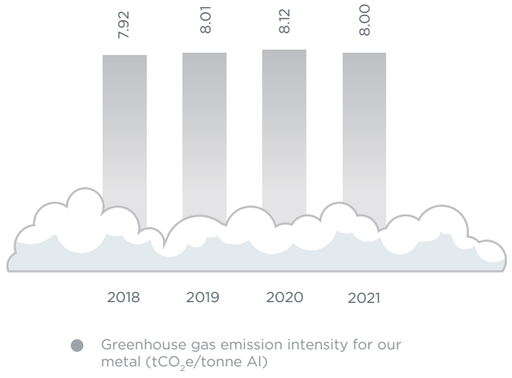


Figure 15: Greenhouse gas emissions intensity for our metal (scope 1 and 2)



[32] Identification of origin being confirmed through attribute tracking standards established by the International Renewable Energy Certification Standard Foundation (I-REC Standard). For further information regarding the source of energy for our CelestiAL product, please refer to page 57.
[33] Local grid factors used to ascertain scope 2 emissions data.
[34] IAI referenced for the global industry average as of 2018 (data taken for anode manufacturing, smelting, and casting and excluding indirect ancillary materials and transportation).

Greenhouse gas emissions in Guinea

In Guinea, our greenhouse gas emissions are predominantly associated with the use of diesel for electricity generation, vehicles and mining equipment. We are not connected to the national electricity grid nor do we source energy from any third parties. Consequently, we do not contribute to any scope 2 emissions.

Despite recent improvements in power production efficiency from the use of our centralised package power plants, in 2021, our greenhouse gas emissions increased by almost 16 per cent from the previous year. This increase was due to the increase in fuel consumption attributable to more vehicular movements and the operation of equipment necessary for the increase in bauxite export from 10.3 million tonnes in 2020, to over 12 million tonnes in 2021. When taken into context with EGA's overall GHG emissions, this increase from our mining activities accounts for a total increase in 0.04 per cent of EGA's total emissions.

However, as we have explored improvements in efficiency and our operating procedures have matured. The greenhouse gas intensity of our operations has been reduced by over 50 per cent since 2019.

Figure 16: Direct (scope 1) greenhouse gas emissions in Guinea[35]

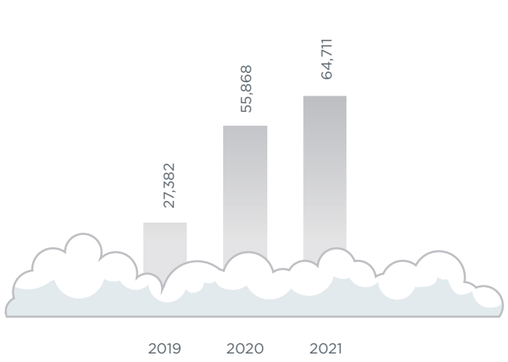
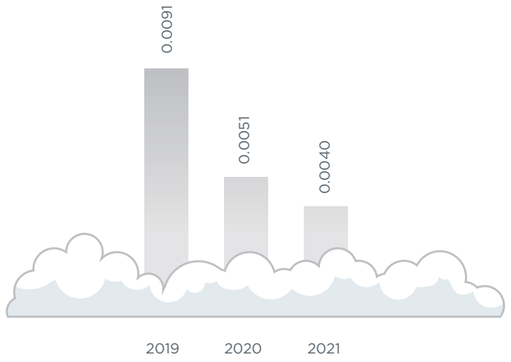


Figure 17: Greenhouse gas emissions intensity in Guinea



[35] Global Warming Potential (GWP) is based on the Intergovernmental Panel on Climate Change (IPCC) 2nd assessment report, (AR2), 1996. 2019 was the first year of operations for GAC, and so we are only able to provide data for the previous three years. Scope 1 emissions have been derived from emission factors from the IPCC 2nd Assessment Report (AR2).

Greenhouse gas emissions targets

Historically, EGA has worked towards greenhouse gas reduction targets based on intensity and published our progress against meeting these targets within our annual sustainability reports. However, we recognise the importance of curtailing total emissions and that in order to avert the worst impacts of climate change it is imperative that the global economy works towards net zero emissions by mid-century.

In 2021, EGA developed a roadmap to reach net zero emissions by 2050, during which we have engaged with both internal and external engineers, technologists and economists to ensure that what we are planning for the short, medium and long term can be technically and commercially viable[36].

Our net zero roadmap tackles emissions from all areas of our organisation including power generation, smelting, casting, refining, mining, supply chain and also considers the role of recycled aluminium and nature-based sequestration solutions.

Net Zero by 2050

We intend to be open and transparent about the work we're doing to reach these targets and will be providing details regarding progress within future sustainability reports.

[36] Further details provided within section 01.

Water use

Water use in the UAE

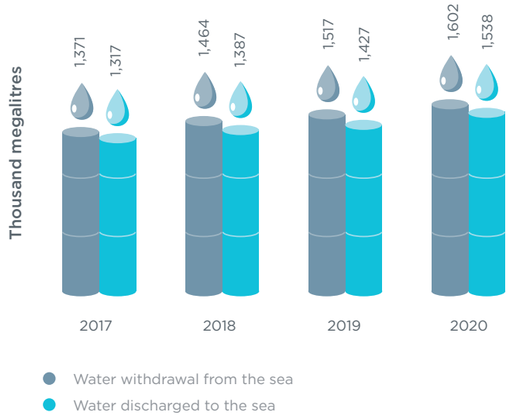
In the UAE, the majority of our water use is for cooling during electricity generation. We extract seawater for this purpose, more than 94 per cent of which is returned to the sea.

In the UAE, we do not use any of the UAE's groundwater reserves or other natural freshwater resources. We meet our freshwater needs through desalination of seawater which is subsequently used for industrial processes and steam generation, as well as for office and residential use on our sites[37].

643 megalitres of water recycled

Equivalent to more than 14,600 water tankers

Figure 18: Water withdrawal and discharge in UAE[38]



We have mapped our water withdrawal, discharge and consumption rates by source and type for all of our facilities in the UAE. In 2021, our total water consumption in the UAE was 63,424 megaliters, a reduction of 29.5 per cent compared with 2020. This reduction has been possible thanks to technology upgrades at our desalination facilities.

In order to minimise the need for desalination, we treat and recycle water from our onsite sewage treatment plants to meet our needs for landscape irrigation. We also reuse some of our Casthouse wastewater for our Fume Treatment Centre in Al Taweelah.

We monitor the quality of the water we return to the sea for parameters including temperature, salinity, and dissolved oxygen, in order to identify any discernible impacts on the marine environment or variation in normal operating parameters.

Our thresholds for water quality are set according to local regulatory requirements to minimise the potential for impacts to the marine environment. In 2021, we identified four incidents of non-compliance for seawater discharge to the marine environment from our site in Jebel Ali. All exceedances were investigated by our environment and operational teams to identify the root cause and determine appropriate remedial action. The majority of these exceedances were associated with discharge temperature and addressed through adjustments in operational parameters, remedial action for which will continue into 2022.

In 2021, our water consumption reduced for UAE operations by 29.5%

In Al Taweelah, we identified one incident of non-compliance for discharge to the marine environment. Our subsequent investigation identified that this breach was attributable to the improper location of a marine monitoring buoy. On siting the monitoring buoy correctly, discharge was confirmed as meeting regulatory thresholds.

We also identified four incidents associated with a fault with our sewage treatment facility[39]. Subsequent investigation and improved maintenance subsequently returned the facility to normal operating conditions.

In 2021, our investigations into incidents associated with discharge limits at both Jebel Ali and Al Taweelah confirmed no discernible impacts to the local environment. All associated monitoring data was reported to the environmental regulatory authority.

[37] We also supply some of the desalinated water generated at our Jebel Ali facility to local customers in Dubai.
[38] Data derived from flow meters.
[39] Three in Al Taweelah and one in Jebel Ali.

Water use in Guinea

In Guinea, we manage our water-related impacts through an integrated water management plan. This plan establishes specific strategies and targets for water use, treatment and protection developed using regulatory requirements of the Guinean Government and IFC Performance Standards. As part of our plan, we have mapped our water withdrawal, discharge and consumption rates by source and type for both our mine site in Tinguilinta and our port facilities in Kamsar. Our main needs for water at both sites are for dust suppression and sanitation purposes.

At Tinguilinta, we meet our water needs through extraction from the Thiouladjiwol Reservoir, approximately seven kilometres from our mine site, and several groundwater boreholes[40]. In Kamsar, we meet our freshwater demands through the extraction and desalination of seawater via our onsite reverse osmosis facility.

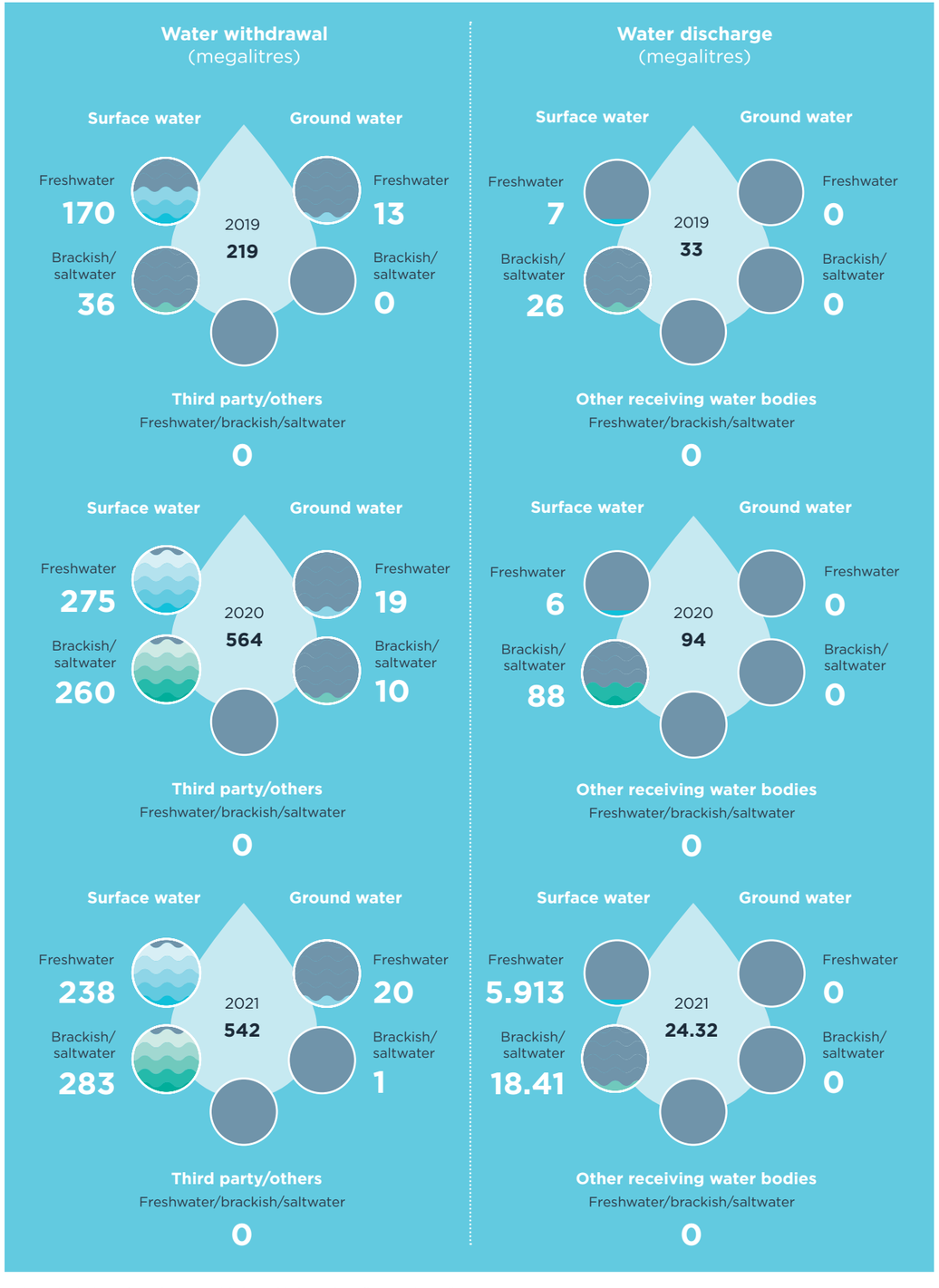
In Kamsar, we discharge treated wastewater from our onsite sewage treatment and brine from our reverse osmosis facility to an adjacent estuary. In Tinguilinta, we discharge treated wastewater from our onsite sewage treatment facilities to an adjacent semi-dry ditch.

Discharge from these facilities is monitored through laboratory analysis for various parameters, including dissolved oxygen, biological oxygen demand, chemical oxygen demand, nitrogen, phosphorous, suspended solids, coliforms, and residual chlorine. Results are compared against Guinean regulations and international standards.

In 2021, our discharge monitoring identified a fault with our sewage treatment facilities in Kamsar and Tinguilinta. These faults were investigated by our environment and operational teams who addressed each fault and devised improvements for sewage treatment. Subsequent monitoring confirmed that each fault was appropriately addressed and that there was no discernible impact on the local environment.

[40] Our environmental and social impact assessment has not identified any of our abstraction sites as being in areas of likely water stress.

Figure 19: Water withdrawal and discharge in Guinea[41]



[41] The calculation of total water withdrawal is based on flow and totaliser meters.

Waste management

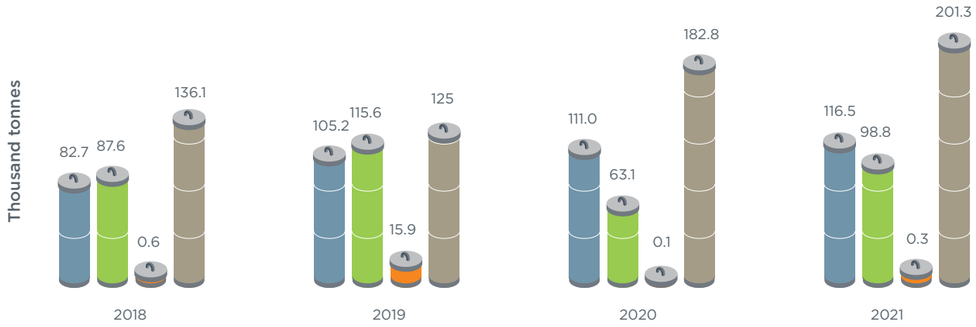
Waste management in the UAE

At EGA the waste hierarchy is at the core of our waste management decisions. We have a comprehensive waste management plan, with a long-term aspiration of sending zero process waste to landfill. In the UAE, we are exploring and developing various opportunities for our waste streams to be used as feedstock for other industries. We also stockpile waste materials at our facilities while we seek recycling options, diverting as much as we can from landfill.

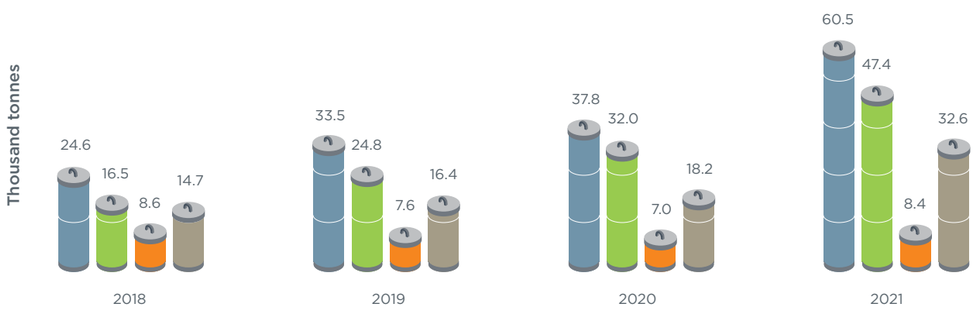
Figure 20: Waste types and disposal methods in UAE[42 43 44]

Total waste generated · Recycled · Landfilled · Total stockpiled volume

Hazardous waste management



Non-hazardous waste



[42] Excludes bauxite residue. All waste weights are measured at a weighbridge.
[43] Total stockpiled' includes the cumulative total of waste stored onsite in-year as well as from previous years.
[44] Historically, we have recorded 'Recycled' data to include recovery by any other means, including waste streams that have been used by other industries as a source of fuel. For future sustainability reports we will include a more in-depth breakdown of how we have diverted from disposal to fully align with GRI 306.

Reusing the waste products from our customers

In 2021, EGA and Gulf Extrusions developed a method whereby EGA is able to use 450 tonnes per month of waste caustic soda generated from Gulf Extrusions' production process.

Aluminium extrusion is a process whereby aluminium is formed into a wide variety of profiles and shapes for use in a multitude of potential applications. In aluminium extrusion, caustic soda is used to dissolve aluminium residue in extrusion dies and to etch extruded aluminium profiles in the anodisation process. Spent caustic soda from Gulf Extrusions is rich with dissolved aluminium. Previously, this by-product required extensive treatment at Gulf Extrusions, producing an aluminium-rich sludge that was supplied as an additive to cement manufacturers in the UAE.

The new approach jointly developed by EGA and Gulf Extrusions removes the need for treatment and enables the re-use of aluminium from the by-product. It also slightly reduces EGA's requirement for fresh caustic soda at the Al Taweelah alumina refinery.

In 2021, EGA and Gulf Extrusions trialled the re-use of spent caustic soda extensively, developing transport protocols to ensure safe transfer between the two companies' sites. In 2021, EGA and Gulf Extrusions agreed to the innovative re-use of spent caustic soda in EGA's production process.

This is another step in EGA's circular economy approach to re-use waste streams as feedstocks, by cooperating with other industries. Under the agreement, Gulf Extrusions will supply EGA with some 450 tonnes of spent caustic soda from its Abu Dhabi and Dubai extrusion plants each month for use in alumina refining.

Waste from the smelting of aluminium

The smelting of aluminium generates a range of hazardous waste materials. In terms of volume, the two most significant hazardous waste streams are spent pot lining (SPL) and dross.

SPL is the used inner lining of reduction cells, which needs to be replaced after several years of operation. SPL is potentially a hazardous material due to its reactive content and requires careful handling during storage and transportation. Thanks to successful partnerships we have developed with cement companies along with support from environmental agencies in the UAE, we now process our SPL and provide it as an alternative raw material for the manufacture of cement.

In 2021, we provided 46,248 tonnes of SPL to the UAE cement industry, equating to 93.9 per cent of our total in-year generation, the remainder being stored onsite for future process and recycling. Not only does the use of SPL as a raw material reduce the demand for natural resources, but given its unique characteristics, the use of SPL in the cement industry can reduce fuel demand and corresponding NO_x and GHG emissions[45].

93.9% of SPL recycled

Dross is a mass of impurities that floats to the top of molten aluminium and is removed during the smelting process. In 2021, 100 per cent of EGA's dross generation was sent to a specialised recycling facility to recover any aluminium from the material. Recovered aluminium is returned to EGA's facilities, so no aluminium is wasted.

The dross recycling process also generates a salt slag by-product. In October 2020, a salt slag treatment facility was commissioned in close proximity to our facility in Al Taweelah. This facility treats our generated salt slag, making this material available for use by the cement, steel and other industries.

[45] EGA commissioned a study in 2018 from the Massachusetts Institute of Technology to model the environmental footprint of spent pot lining (SPL) used in cement production. Findings identified a potential 3.5 per cent reduction in NO_x emissions and 0.72 per cent reduction in CO_2 emissions.

Waste from the refining of alumina

The most significant, and often challenging waste material generated during the alumina refining process is bauxite residue. This material consists of the remaining ore fraction once alumina has been extracted through the Bayer process and comprises several metal oxides and some residual, highly alkaline compounds. The hazardous nature of bauxite residue is principally associated with this high alkalinity which, if uncontrolled, can significantly alter the chemistry of natural environments.

Globally, the most common approach to managing this material is large-scale storage in specially constructed dams and impoundments, with associated risks of environmental degradation of local watersheds and ecosystems. For decades, the industry has sought more sustainable and commercially viable methods.

At EGA, our bauxite residue is washed, pressed into a dry cake, and transported using a fleet of sealed trucks to a purpose-built bauxite residue storage facility. This facility is located within an expanse of desert approximately 30 km inland from the coast in the Emirate of Abu Dhabi. It is fully lined and will be progressively sealed, with the land being made available for reuse for potential projects ranging from warehousing to a solar farm.

> Our intensive R&D programme has given us a wealth of new knowledge about this resource, some of it quite surprising, and has resulted in several novel, potentially large-scale applications for bauxite residue.

Markus Graefe
Manager – Bauxite Residue R&D

In 2021, we deposited 2.93 million tonnes of bauxite residue at our facility. But storage is not intended as our long-term solution for this waste. EGA has a dedicated R&D group tasked with identifying ways of converting this waste material into useful products, reducing or eliminating the need for storage and unlocking bauxite residue as a new material resource for the UAE.

Identifying ways of converting bauxite residue waste material into useful products

Optimised bauxite residue

For six years, EGA has been conducting research into the potential conversion of bauxite residue into an environmentally benign raw material that could be used as a feedstock for other industries. We refer to this environmentally benign material as Optimised Bauxite Residue, (OBxR).

In 2021, our years of extensive research have led to the design preparation of a pilot facility, that once commissioned will be able to convert up to five tonnes of bauxite residue into OBxR every day. This facility will implement a new hydro-metallurgical process that neutralises caustic bauxite residue into an environmentally benign raw material in a matter of hours, instead of undergoing decades-long natural processes. Commissioning for this pilot facility is planned for 2023 and will eventually give EGA the ability to conduct large-scale, field-based plant growth trials using OBxR as a manufactured soil, suitable for arid climates.

Manufactured soils

EGA has worked with The University of Queensland's School of Agriculture and Food Science since 2017, exploring methods for the manufacture of soil from OBxR and examining its potential as a plant growth medium. We refer to this manufactured soil as Turba (which in Arabic means soil).

In 2021, following extensive studies on the structural properties of Turba, we were able to evidence its benefits as a plant growth medium relative to the UAE's dune sand. Our studies concluded that Turba is better able to retain and provide water to plants, subsequently increasing biomass yields and resilience. Such properties are extremely desirable for soils in arid desert climates or where water is scarce.

We have also worked with the American University of Sharjah since 2018, exploring means of converting food waste into high-energy value bio-oil and acidic biochar, a charcoal-like material used to improve soil stability and water retention that ultimately helps plants grow. Currently, much of the food waste in the UAE is either incinerated or landfilled, both resulting in greenhouse gas emissions. The development of biochar in the UAE will potentially find a role in EGA's future manufactured soils.

Bioneutralisation

In 2021, we continued to sponsor bio-neutralization studies of ATA bauxite residue with the University of Western Australia. Bio-neutralization employs the use of naturally occurring microbial species to neutralise caustic-alkaline bauxite residue. Our study explored the potential to scale up and industrialise the use of microbes by using common organic waste materials in the UAE to encourage the growth and development of neutralising microbes. Studies have identified that by encouraging select microbes, it is possible to neutralise bauxite residue in only a few days, rather than the several decades that would ordinarily be required.

Raw material for the steel industry

In 2021, we continued detailed investigations of the chemistry, mineralogy and physical characteristics of bauxite residue from our refinery which culminated in a technique for extracting high-quality iron ore.

The use of bauxite residue as a feedstock for steel production has been a goal of the alumina industry almost from its inception over a century ago, but has been hampered by the lack of a means of increasing the iron content and reducing impurities to make it a practical alternative to conventional iron ore. Our new process opens up the possibility of finally achieving this long-held goal.

Further development and trialling of the technology involved is on-going which, if successful, could lead to up to 15 per cent of EGA's bauxite residue being converted into a valuable raw material for the steel industry.

Bauxite residue in construction products

For five years, we have been working with the Flemish Institute for Technological Research exploring opportunities for the production of lightweight aggregates for use in the construction industry. This work was concluded in 2021, due to ongoing difficulties in producing stable yields and persistent issues with the production process. Nevertheless, we are considering alternative approaches and research into this product will be revisited in future years.

We have also continued to investigate the potential to develop a high-density, high-strength aggregate from bauxite residue combined with fly ash, another globally widespread waste material. In 2021, we completed an important step, demonstrating the robustness of the associated process and confirming that it is possible to deliver a standard product, despite changes in the source and quality of the feedstock material. At the same time, we were also able to achieve further enhancements to end-product quality.

Waste management in Guinea

We also apply the waste hierarchy to our waste management decisions in Guinea. We have developed a comprehensive waste management plan covering activities both at the port and mine site that is developed in accordance with both national and international standards[46].

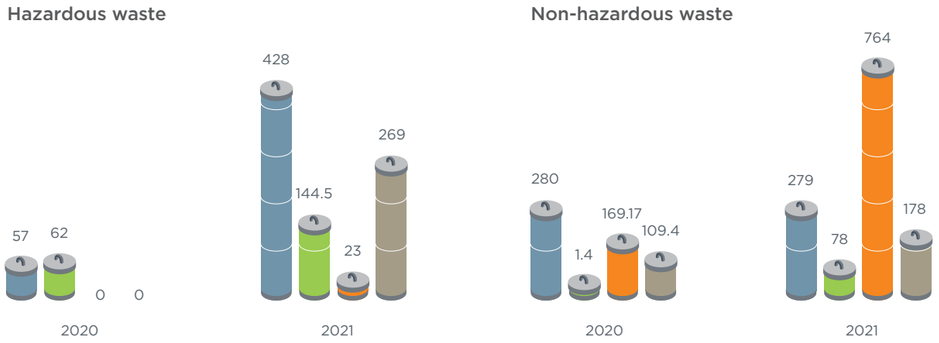
The majority of our waste generated from mining operations is associated with the maintenance of machinery and equipment, as well as sanitary and domestic waste from offices and welfare facilities. Earth and vegetation material is reused wherever possible throughout our mine site. Identifying opportunities for reuse and recycling are particularly challenging given that our mining concession is in an isolated area without access to sophisticated waste treatment infrastructure.

Much of our waste is currently stored and controlled onsite while we research opportunities for reuse or recycling. Sanitary and medical wastes are incinerated as are some non-hazardous wastes such as packaging materials[47].

In 2021, our waste generation increased significantly. This was predominantly due to increased maintenance activities, many of which were curtailed during site controls and restrictions to minimise the potential spread of COVID-19 during 2020 and earlier in 2021.

Figure 21: Waste types and disposal methods in Guinea[48] [49] [50]

Total waste generated · Recycled · Landfilled · Total stockpiled volume



[46] Including the Equator Principles, the International Finance Corporation Performance Standards and regulatory requirements of the Guinean Government.
[47] Total stockpiled includes the cumulative total of waste stored onsite in-year as well as from previous years.
[48] Weights are determined through the use of site-based industrial scales, with the exception of odd-shaped, non-bulk wastes which are estimated by volume.
[49] In 2021, we increased the total quantity of our incinerated non-hazardous waste as we managed stored waste streams that had built up from the construction phase.
[50] Operation of the incinerator is licensed by the local authorities and included in the scope of independent third-party audits conducted approximately every six months.

Biodiversity

Biodiversity management in Guinea

In Guinea, prior to the start of construction, our environmental and social impact assessment confirmed that our mining concession, rail corridor and port areas were in close proximity to areas of international importance for biodiversity. Our mining concession includes grassy and wooded savannah and gallery forests, all of high biodiversity value. Mangroves are also located along the perimeter of our port in Kamsar.

Furthermore, our assessments confirmed that the habitats in and around our mining and port concessions support rich assemblages and important species of mammals, herpetofauna, avifauna and flora, including 23 IUCN Red List and National Conservation List species. Including the critically endangered West African Chimpanzee.

All our biodiversity conservation work is governed through biodiversity management plans prepared in accordance with IFC Performance Standards and made publicly available[51].

Prior to conducting any vegetation clearance, we mapped out plant assemblages and habitat types so as to fully understand the mitigation work necessary and ensure that our remediation efforts are suitably planned and financed to appropriately restore habitats once mining operations have concluded. All of our biodiversity mitigation measures in Guinea are designed to achieve no net loss of biodiversity and a net gain for critical habitats[52].

In establishing our mine site along with the associated infrastructure and port facilities, it has been necessary to clear a total of 12.24 km^2 of vegetation. Prior to the clearance of any vegetated areas, we ensure surveys are undertaken by our environmental specialists to ensure that any land clearance is sensitive to the biodiversity value of the site. In several instances, we have identified areas of value not to be disturbed or we have translocated certain species beyond the area planned for clearance.

> We are committed to ensuring the sustainable management and protection of natural resources and biodiversity in and around our operations.

Golota Isaac Lamah
Manager - Environment and Community Relations

2021 was only the second year of full operation at our mine site, subsequently we do not yet have any areas of our site where mining activities have been completed to such an extent that remediation can begin. However, in 2021, we were able to continue with remediation efforts for several areas that were cleared of vegetation as part of the construction phase, restoring land coverage of 78,000m^2 using species of local provenance grown in our own nursery. We have already restored almost 1 km^2 of vegetation.

During the development of our biodiversity management plans, we concluded that in order to appropriately mitigate impacts for the critically endangered West African Chimpanzee and achieve eventual net gains for this species, it would be necessary to establish a biodiversity offset area away from our mining concession.

Through cooperation with specialist ecologists, international civil society groups, the IFC, government representatives and other mining entities in Guinea, we have committed to a goal of establishing an enhanced, protected area for the West African Chimpanzee in Guinea. Known as the Moyen Bafing Offset Project, activities include habitat enhancements, regular monitoring, local community engagement and reforestation, all with the goal of increasing the local population of the West African Chimpanzee.

On the 4 of May 2021, the president of the Republic of Guinea signed a decree establishing the Moyen-Bafing National Park, which is a now protected area of 6,767 km^2 hosting the largest continuous population of chimpanzees in West Africa. This decree has been a significant milestone for the Moyen Bafing Offset Project, which is now afforded both national recognition and legal protection.

[51] Available on the IFC project disclosure portal.
[52] Critical habitats have been defined as either 1) habitat of significant importance to Critically Endangered and/or Endangered species; 2) habitat of significant importance to endemic and/or restricted-range species; 3) habitat supporting significant global concentrations of migratory species and/or congregatory species; 4) highly threatened and/or unique ecosystems; and/or 5) areas associated with key evolutionary processes.

Biodiversity management in the UAE

In the UAE, our facilities at Al Taweelah are approximately two kilometres from Ras Ghanada, a nationally protected marine reserve, and our Jebel Ali site is approximately seven kilometres from the Jebel Ali Wildlife Sanctuary[53]. Both these protected areas support important clusters of coral, mangrove and seagrass.

At both of our operational sites in the UAE, our discharge monitoring efforts take account of these valuable conservation areas and, to date, we have not identified any adverse impacts associated with our operations after almost 40 years of operations.

Supporting mangroves in the UAE

In 2021, EGA supported the development of new areas of mangrove forest in the UAE. In collaboration with the One Billion Tree-Planting Initiative, 10,000 mangroves were planted in Jebel Ali Wildlife Sanctuary.

Mangroves, which grow in tidal areas of the coast, are an important native tree species in the UAE, and can be capable of sequestering carbon dioxide from the atmosphere up to four times as effectively as rainforest. Mangrove trees also protect coastal areas from erosion and contribute to the sustainability of coastal ecosystems.

To ensure suitable site location, planting techniques, appropriate mangrove provenance and long-term success of the new mangrove areas, we relied on expertise from the Emirates Marine Environmental Group, a local NGO that manages the Jebel Ali Wildlife Sanctuary.

[53] Confirmed as a wetland of international importance for biodiversity in accordance with the Ramsar Convention (an intergovernmental environmental treaty established in 1971 by UNESCO).

In 2021, we continued our conservation efforts associated with the critically endangered Hawksbill turtles that visit the shores adjacent to our facility in Al Taweelah to lay their eggs.

To ensure EGA's operations do not disturb the beach ecosystem adjacent to EGA's Al Taweelah facility and minimise the risk of predation by any feral animals, EGA monitors the beach throughout the nesting season, conducting daily inspections, tracking nesting patterns, and installing protective buffers to keep nests safe from harm. EGA also arranges for waste that is washed up on the beach to be removed keeping the nesting site clean throughout the nesting season while also rescuing any distressed turtles that may be washed ashore.

In 2021, we rescued and released back to the sea more than 40 hatchlings after nest sites were damaged by unusually high tides and other challenging weather conditions.

For any sick turtles or hatchlings found on the beach, EGA ensures care is provided by the Jumeirah Group's Dubai Turtle Rehabilitation Project, which in 2021 rehabilitated three sick Hawksbills rescued during our monitoring efforts. The turtles have since made a full recovery and been released back into the sea.

Our response to environmental incidents

Our environmental management plans establish clear protocols for the identification, communication, classification, remediation and root cause analysis of environmental incidents.

When assigning a classification to environmental incidents, we consider the magnitude and potential for adverse impacts for environmental receptors.

In 2021, EGA did not receive any fines or non-monetary sanctions for non-compliance with environmental laws or regulations.

Environmental incidents in the UAE

In 2021, we did not encounter any significant environmental incidents at any of our facilities in the UAE. However, we did raise several non-conformances associated with minor incidents at our facilities in the UAE, reporting each to the regulatory authorities. None of these incidents resulted in any adverse environmental impacts and were quickly remedied following control procedures defined under our environmental management system.

In 2016, EGA received a violation notice from the environmental regulator in Dubai regarding NO_x emissions from our power plant in Jebel Ali. This violation was a consequence of our use of older gas turbines. In 2021, following the commissioning of our new H-class power block, we have substituted older turbines and our NO_x emissions have reduced by 20 per cent. In 2022, we will be seeking to formally close this violation with the environmental regulator in Dubai.

Environmental incidents in Guinea

In May 2021, we had a significant environmental incident at the port facility's wastewater treatment plant. This involved the spillage of untreated wastewater onto the land. This was due to a mechanical problem with the wastewater transfer level controller where contaminants, including oil, are separated from water. After the incident, the team immediately stopped the release of the untreated wastewater and implemented remediation actions, which included cleaning the surrounding areas and sending contaminated soil to the waste management facility for treatment and disposal.

We also identified several small diesel spills associated with refuelling. None of these spills resulted in any adverse environmental impacts and were quickly remedied by control procedures defined under our environmental management system.

03

Social responsibility

Social responsibility

Health and safety management approach

At EGA, the health and safety of our employees, contractors and neighbours is our top priority. Providing safe and healthy working conditions is the first commitment in our core policy[54].

We recognise that, like many industrial processes, there are numerous potential hazards associated with the production of aluminium such as exposure to noise, vibration, airborne contaminants, and dangerous materials, as well as moving machinery and working at height.

Alumina refining poses additional hazards associated with the use of highly corrosive materials. Smelting and casting activities include the potential for exposure to strong magnetic fields, high voltage, molten metal, and high temperatures. While mining operations rely on large vehicular movements, the transport of heavy loads and controlled blasting.

Across all operations and project sites, EGA proactively identifies and mitigates occupational hazards aiming to engage all our employees and contractors in this effort. We apply a hierarchy of controls to eliminate hazards wherever possible and minimise the risk of those that cannot be eliminated entirely.

Risk identification, control identification, and hazard elimination are conducted at each of our sites according to statutory or internationally recognised standards and guidelines.

Our dedicated safety team continually reviews safety data from across all of our operational and project sites to identify hazards, trends, potential concerns,

Occupational health and safety management systems and performance standards

Aluminium Stewardship Initiative

- Jebel Ali smelting and casting
- Al Taweelah smelting and casting

ISO 45001:2018

- Jebel Ali smelting and casting
- Al Taweelah smelting and casting
- Al Taweelah alumina refinery project

OSHAD

- Al Taweelah smelting and casting
- Al Taweelah alumina refinery project

IFC Performance Standards and World Bank Guidelines

- GAC bauxite mine

> **We are committed to providing healthy and safe working conditions. We will only be truly successful if at the end of each and every day, everyone gets home safe and well.**

Aboubacar Sidiki Keita
Senior Superintendent - Health and Safety

[54] Our core policies are published on our website https://www.ega.ae/en/about-us/our-policies-and-certifications

opportunities for improvement and any need for an increased level of focus in a particular area.

All of our facilities in the UAE operate according to an occupational health and safety management system certified to the International Organization for Standardization's ISO 45001:2018[55].

All our Abu Dhabi operational management systems are also developed to ensure alignment with Abu Dhabi's Occupational Safety and Health Centre's (OSHAD) System Framework. While all of our smelting and casting facilities in the UAE have been confirmed as meeting the ASI Performance Standards[56].

Our mine in Guinea, operates according to occupational health and safety management systems developed in accordance with the International Finance Corporation Performance Standards, World Bank Guidelines, Equator Principles, African Development Bank's Integrated Safeguards System and regulatory requirements of the Guinean Government[57].

In the UAE, as well as conducting regularly internal audits of our management systems, we are frequently audited by independent third parties against the requirements of ISO 45001:2018 and OSHAD.

Our Guinea operations are regularly inspected by an independent third party, to ensure that we adhere to the International Finance Corporation Performance Standards.

EGA's occupational health and safety management systems and associated safety controls are extended to all EGA employees and the 980 directly supervised contractors[58] we worked with in 2021. Indirectly supervised contractors are required to work to a health and safety system compliant with EGA's core requirements, as defined in our Responsible Sourcing Standards.

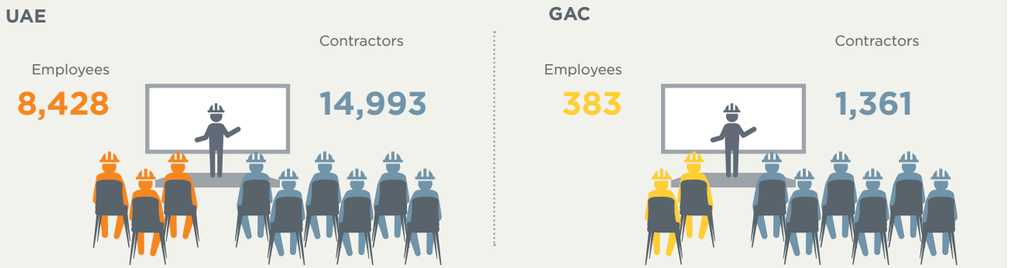
Safety is everyone's responsibility at EGA. All our employees have the means to identify and suggest methods to improve safety and raise safety concerns without fear of reprisal. Suggestions or concerns can be raised via dedicated reporting lines, smartphone applications, open suggestion schemes, toolbox talks, safety steering committees, virtual town hall meetings, regular safety meetings and face-to-face with our specialist safety teams. Any improvements or updates to risk identification procedures, as well as associated controls and requirements for hazard elimination, are undertaken following concerns or suggestions raised by any of our colleagues under the guidance of our safety teams.

Regardless of their position, every EGA employee has the authority to refuse or stop any activity that is deemed unsafe. We convey this message as part of our induction and safety refresher training.

Task-specific safety requirements are communicated to staff and directly supervised contractors through appropriate, tailored training events with refresher courses, at a frequency relevant to the degree of risk[59]. Training needs are identified according to assessment by EGA's safety professionals and effectiveness is monitored in accordance with our occupational health and safety management systems.

[55] Our certificates are published on our website https://www.ega.ae/en/about-us/our-policies-and-certifications
[56] Certificate and public summary report is available for review at https://aluminium-stewardship.org/about-asi/asi-members/emirates-global-aluminium-pjsc
[57] Details available at https://disclosures.ifc.org
[58] Directly supervised contractors include workforce who are not EGA employees but whose work activities are directly controlled by EGA's health and safety procedures.
[59] All safety training is free of charge and is provided during paid working hours.

Figure 22: Safety training in 2021 (total number of attendees at safety courses)



Also, in 2021, for our online micro-learning platform 'Axonify', we added specific modules, covering lifting operations, gas and atmospheric testing awareness and the role of our electrical safety subcommittee.

We also rolled out additional 'e-learning' safety training to cover electrical isolation awareness, lifting operations and EGA's 'Life-Saving Rules'.

EGA Life Saving Rules

EGA is a member of the Health, Safety and Environment committees at the International Aluminium Institute and the Gulf Aluminium Council, enabling us to share performance data and learn from best practice.

Each incident at EGA is investigated by an appointed investigation team that consists of area management, subject matter experts and our safety team, with investigations being reviewed by area managers and safety leaders. Our focus being the welfare of any injured parties, root cause analysis and suitable prevention. Our intention is to do whatever is necessary to ensure that nobody is hurt in the same way again.

For serious injuries, investigations are reviewed by our Executive Committee and the Technical and Projects Committee of our Board.

While robust safety systems, controls and training are essential, we believe that these alone are not enough. We work hard to instil a safety-focused culture that engages everyone who works for or with our organisation.

At EGA, we aim to record all incidents and near misses no matter how small so we can track our performance accurately and continually improve the safety of our workplace.

Safety performance

Safety performance in the UAE

In 2021, we encountered zero fatalities or high-consequence work-related injuries[60] at any EGA site.

Most of the safety incidents that occurred involved either no injury or only minor injuries treatable by first aid.

Our main types of injuries were hand and finger injuries often associated with the use of hand tools. However, one of our employees did suffer a more serious injury

This injury involved trauma to an employee's leg following a fall from a set of vehicle access steps. Our colleague was taken to hospital where x-rays confirmed a leg fracture and need for surgery. Thankfully, a full recovery was made and our colleague was able to return to normal duties after twelve weeks of rest and recovery.

Following the incident, we conducted a facility-wide survey to identify any other vehicles that may have similar access steps. Subsequently we installed retrofits to minimise the risk of any reoccurence.

Zero fatalities in 2021

Improving hand and finger safety

In 2021, we launched a campaign titled "Your Hands Matter". The intent being to raise awareness regarding our most common forms of injury and further emphasise the importance of safe work practices.

The focus was on spreading awareness of the importance of ensuring to use of the right tools, the right protection and following standard operating procedures. The campaign was rolled out across the entirety of our reduction department in the UAE.

[60] A high consequence work related injury is one from which the worker cannot, does not, or is not expected to recover fully to pre-injury health status within six months.

Figure 23: UAE safety statistics

Working hours[61] (thousands)

	2018	2019	2020
Employees	15,820	15,781	16,005
Directly supervised contractors	8,102	4,557	3,819
Total	23,922	20,338	19,824

2021: Employees 18,165; 20,826; Directly supervised contractors 2,661

Total Recordable Injuries (TRI)[62]

	2018	2019	2020
Employees	19	29	24
Directly supervised contractors	11	11	6
Total	30	40	30

2021: Employees 15; 22; Directly supervised contractors 7

Lost Time Injuries (LTI)[63]

	2018	2019	2020
Employees	0	3	0
Directly supervised contractors	3	1	0
Total	3	4	0

2021: Employees 1; 1; Directly supervised contractors 0

Total Recordable Injury Frequency Rate (TRIFR)[64]

	2018	2019	2020
Employees	1.20	1.84	1.50
Directly supervised contractors	1.36	2.41	1.57
Total	1.25	1.97	1.51

2021: Employees 0.83; 1.06; Directly supervised contractors 2.63

Lost Time Injury Frequency Rate (LTIFR)[65]

	2018	2019	2020
Employees	0.00	0.19	0.00
Directly supervised contractors	0.37	0.22	0.00
Total	0.13	0.20	0.00

2021: Employees 0.06; 0.05; Directly supervised contractors 0

[61] Working hours for employees have been calculated according to total hours paid.
[62] Total recordable injuries is the sum of all work-related injuries and illnesses during the reporting period and includes any fatalities, lost time injuries, medical treatments or incidents leading to restricted work activities.
[63] Lost time injuries is the sum of all work-related injuries or illnesses that result in an affected individual temporarily being unable to perform any regular job or restricted work activity on a subsequent scheduled workday or shift.
[64] Total recordable injury frequency rate is the total number of recordable injuries per million hours worked during the reporting period.
[65] Lost time injury frequency rate is the total number of lost time injuries per million hours worked during the reporting period.

Safety performance in Guinea

In 2021, despite the increase in production and potential distractions associated with COVID-19, we continued to record a low number of injuries with our total recordable injury frequency rate being 62 per cent lower than the industry average[66].

During 2021, most of our safety incidents involved either no injury or only minor injuries treatable by first aid. The main types of injuries being common hand and finger injuries often associated with equipment 'pinch points'.

However, one of our employees suffered a more serious injury and one of our contractors suffered a high consequence[67] injury.

Our employee was injured after a fall from an engineering platform while servicing a locomotive. Our colleague was taken to hospital, where scans confirmed that he had suffered a hair-line fracture to his back. The injury did not require surgery and thankfully, after three months of rest and recovery, a full recovery was made and we welcomed our colleague back to work. After the incident, we revised all risk assessments for the locomotive servicing area and subsequently installed additional protective measures including anti-skid flooring, guard rails and a permanent 'life-line'[68] above the locomotive maintenance platform. We also provided training on the use of the 'life-line', as well as refresher training on working at heights.

The second incident involved a contractor whose hand was caught between moving equipment while cleaning a ventilation system. The contractor was taken to the hospital to treat his hand, but unfortunately, surgeons concluded that the upper part of his little finger on his right hand would need to be removed. Thankfully, the individual retained the use of his hand and was able to return back to normal duties after a six-week recuperation period. Our investigation identified that the moving equipment had been caused by a back-draft through the ventilation system that the contractor was working on. We have subsequently installed locking mechanisms to prevent a similar accident from happening again. We also provided refresher training for all ventilation maintenance staff and contractors.

[66] Industry average sourced from ICMM 2020. (https://www.icmm.com/en-gb/research/health-safety/benchmarking-2020-safety-data)
[67] A high consequence work related injury is one from which the worker cannot, does not, or is not expected to recover fully to pre-injury health status within six months.
[68] A fall arresting device attached to a harness that absorbs the force of a fall, preventing injury to the wearer.

Figure 24: Guinea safety statistics[69]

Working hours (thousands)

	2018	2019	2020
Employees	439	601	567
All contractors	11,486	10,461	5,431
Total	11,925	11,062	5,999

2021: Employees 717; 7,236; All contractors 6,520

Total Recordable Injuries (TRI)[70]

	2018	2019	2020
Employees	1	0	0
All contractors	8	8	5
Total	9	8	5

2021: Employees 2; 8; All contractors 6

Lost Time Injuries (LTI)[71]

	2018	2019	2020
Employees	0	0	0
All contractors	1	2	0
Total	1	2	0

2021: Employees 1; 2; All contractors 1

Total Recordable Injury Frequency Rate (TRIFR)[72]

	2018	2019	2020
Employees	2.28	0.00	0.00
All contractors	0.70	0.76	0.92
Total	0.75	0.72	0.83

2021: Employees 2.79; 1.11; All contractors 0.92

Lost Time Injury Frequency Rate (LTIFR)[73]

	2018	2019	2020
Employees	0.00	0.00	0.00
All contractors	0.09	0.19	0.00
Total	0.08	0.18	0.00

2021: Employees 1.40; 0.28; All contractors 0.15

[69] We have reported safety performance in Guinea for all contractors, considering that the majority of the key operational works are undertaken by indirectly supervised contractors.
[70] Total recordable injuries is the sum of all work-related injuries and illnesses during the reporting period and includes any fatalities, lost time cases, medical treatments or incidents leading to restricted work activities.
[71] Lost time injuries is the sum of all work-related injuries or illness that result in an affected individual temporarily being unable to perform any regular job or restricted work activity on a subsequent scheduled workday or shift.
[72] Total recordable injury frequency rate is the total number of recordable injuries per million hours worked during the reporting period.
[73] Lost time injury frequency rate is the total number of lost time injuries per million hours worked during the reporting period.

Keeping people healthy

Our continued response to COVID-19

Throughout 2021, all our doctors, nurses, clinic staff, and occupational health and safety professionals in both the UAE and Guinea continued to work exceptionally hard in the fight against COVID-19 and all were instrumental in safeguarding the health of everyone at EGA.

We continued to operate on-site medical centres specifically to assist in our response to the pandemic providing reverse transcription-polymerase chain reaction (RT-PCR) tests and rapid antigen testing at no cost to the individual. By the end of 2021, we had conducted over 300,000 tests. In the UAE, we were also able to administer more than 20,000 COVID-19 vaccinations at our on-site medical centres.

Our efforts to minimise the transmission of the virus touched every corner of our business, while externally, we engaged with industry peers, medical professionals, government entities and medical laboratories to ensure we were doing all we could to understand, control and eliminate COVID-19.

In both the UAE and Guinea, we implemented guidance issued by the World Health Organization and government health agencies, as well as actions learned from our peers and epidemiology studies, to minimise the risk of transmission. This involved planned physical distancing, targeted disinfection and meticulous use of personal protective equipment.

Among all of our preventative measures, employee awareness and education were regarded as being the most important, the greatest perceived threat to successfully beating COVID-19 being ignorance or complacency. Throughout 2021, we continued to educate and motivate employees through awareness and engagement programmes including regular alerts, notices, extensive visual communication, videos, toolbox talks, CEO briefings and regular updates regarding the findings from our on-site RT-PCR testing. We also continued to make available a free 24/7 service whereby any of our employees could gain rapid access to a doctor through an online application.

Healthcare in the UAE

We operate our own clinics at Al Taweelah and Jebel Ali, run by qualified doctors, nurses and emergency medical technicians, where we assess and attend to the health of our employees. Services at our clinics are also available to family members of our employees and contractors.

In 2021, our clinics provided support from over 60 doctors, nurses and other medical staff, as well as specialist teams to run on-site testing facilities for COVID-19 and to conduct RT-PCR tests. With large volumes of data available as a consequence of widespread RT-PCR testing, we were able to analyse these data to help us identify any transmission patterns and how to further improve our management of the virus.

At our clinics, we provide all new starters with a medical examination, including blood tests, eyesight examinations, and hearing checks. We conduct regular check-ups to ensure our staff remain fit for work and to identify any early signs of ill health. In 2021, we provided more than 1,311 medical check-ups to employees and contractors.

Heat-related illness is a common risk for industries working with molten metal, especially in hot climates. In the UAE, heat-related illness is classified as an 'occupational disease'. During 2021, we recorded two instances of heat-related illness. In each instance, our colleagues made a full recovery after rest and rehydration.

In 2021, we conducted more than 76,000, hydration tests to ensure people working on our sites remained suitably hydrated. Our goal is zero cases of heat-related illness. We have decades of experience in managing working safely in hot conditions, controlling exposure times and making sure our employees and our contractors remain hydrated.

> We have come a long way through the COVID pandemic. The time and effort we have dedicated to support our employees and colleagues during this difficult time was so humbling and rewarding. We keep reminding ourselves that together we can beat COVID-19.

Dr. Mariam AlMaazmi
Senior Supervisor - Occupational Health

Figure 25: Heat-related illness cases in UAE

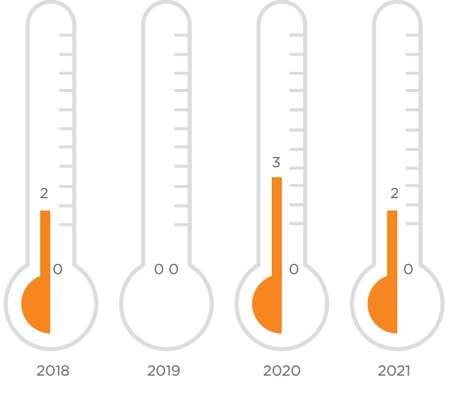
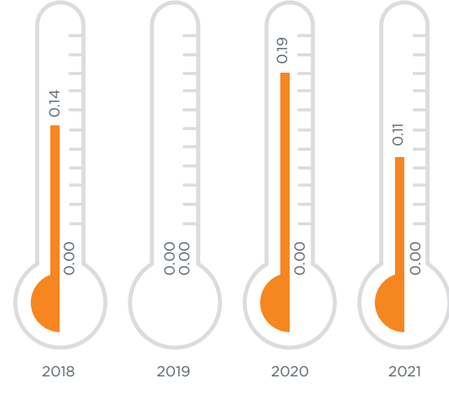


Figure 26: Occupational disease rate (ODR) in UAE[74]



[74] ODR is calculated per million work hours. These figures contribute to EGA's TIRFR in the safety section.

Health promotion campaigns in the UAE

In addition to our frequent awareness and educational campaigns regarding COVID-19, we also ran a series of other salient health awareness campaigns in the UAE for our employees and contractors.

As with every year, we promote health and hydration awareness during the summer months in the UAE, reminding everyone working at our sites to regularly hydrate, take regular breaks and to immediately take rest should anyone suspect any symptoms of heat-related illness.

Mindful of the pandemic's toll on mental health, we continued our comprehensive mental well-being campaign from 2020, including a series of webinars, e-learning activities and videos to complement our long-standing Employee Assistance Programme. In 2021, we also included the distribution of a monthly newsletter and the launch of a new mental well-being app, which received 6,734 hits. Other new tools included the training and identification of mental health first aiders for staff, mental health advocates, well-being seminars, and an individual resilience training programme, as well as the offer of 1:1 cognitive behavioral therapy to aid stress management. Physical wellness was also promoted with an outdoor yoga sessions at our Jebel Ali Residential area.

EGA
الإمارات العالمية للألمنيوم
EMIRATES GLOBAL ALUMINIUM

We care about our employees and are always here to help

For personal support, contact the Employee Assistance Programme anytime

For services in UAE, call:
8000.444.0790 8000.3570.2579 (mobile)
For services in India, call:
8000.3570.4410 (+91.981.871.1035 landline)
For services in the Philippines, call:
8000.3570.4416 (+63.2395.3309 landline)

Healthcare in Guinea

In Guinea, we operate on-site clinics at both Kamsar and Tinguilinta, staffed by qualified doctors and nurses. Our principal mining contractor also operates a fully equipped clinic available to all employees at our mine site. Services at our clinics include first aid training and medical consultation on both chronic disease and healthy living. The Guinean Red Cross also provides first aid training to employees and contractors.

We also have partnering agreements in place with in-country medical centres, such as the Anaim Hospital in Kamsar and the Clinique Ambroise Pare in Conakry, and we have contracted an international emergency medical evacuation service which is available for severe cases. We provide medical health insurance that ensures our employees are able to make use of these facilities in-country.

GAC's medical team regularly visits our operations sites and local communities to inspect hygiene levels and promote healthy lifestyles. Our medical service provider tracks any international disease outbreak or significant health concerns that could affect the region in which we operate. Regular travellers are provided with medical screening and check-ups upon returning to Guinea. Further to this, we track any health issues within Guinea and the region through the Guinea National Health Department.

In 2021, we continued to record zero occupational diseases among GAC's employees and contractors and provided 325 periodic medical check-ups.

Malaria is endemic to Guinea, and GAC has a comprehensive control programme to reduce this risk including mosquito fogging, larviciding, standing water prevention as well as the provision of mosquito nets and awareness programmes for all personnel.

Zero occupational diseases in Guinea

All of our clinics are equipped with detection and treatment equipment and medication. We respond to any suspected case of malaria among our employees or contractors and routinely monitor malaria rates in the region in order to track the degree of risk.

Health promotion campaigns in Guinea

In 2021, we ran a number of health awareness campaigns in Guinea for our employees, contractors and members of the local community. These included the following:

- Malaria prevention
- COVID-19 identification and prevention
- First aid
- Healthy food habits
- Hypertension awareness
- Diabetes
- Nutrition and lifestyle changes

The majority of campaigns were delivered through practical training courses, toolbox talks, post campaigns and one-to-one training sessions, all delivered in ways that minimised the risk of COVID-19 transmission.

Engaging with communities

As part of EGA's core policy, we respect our neighbours and are committed to positively engaging with local communities wherever we operate to maximise the benefits of our presence while mitigating potential adverse impacts.

We operate planned and targeted community engagement programmes across all of our sites in both the UAE and Guinea. We work with numerous stakeholders, including community representatives, non-governmental organisations, educational institutions and respective governments.

In Guinea, we have long recognised that the development of our mining operation would result in land-use changes and potential community disruption. With this in mind, we actively seek to minimise these impacts and where they are unavoidable, we have developed and implemented plans to alleviate, mitigate, or compensate.

We believe that the best way to maximise our positive impact is through grassroots community engagement initiatives that increase economic opportunity and improve quality of life. Successful projects have included infrastructure upgrades, local business engagement, educational programmes, and employing community members where possible within our operations.

We also take into consideration the potential indirect impacts of our operations, such as increased migration to local towns and communities as economic opportunities and quality of life in these areas increase.

All of our community impact assessments and project planning in Guinea are undertaken in accordance with the International Finance Corporation's Environmental and Social Performance Standards, Equator Principles, African Development Bank Integrated Safeguards System and regulatory requirements of the Guinean Government. Associated studies, engagement plans, community investment strategies, closure and rehabilitation requirements, policies and reports are made publicly available on the IFC website[75], with implementation regularly monitored[76] by an independent third party to ensure that we are meeting our commitments.

[75] For more information, please visit the IFC Project Information Portal website: https://disclosures.ifc.org/project-detail/ESRS/24374/guinea-alumina-corporation
[76] Approximately every six months.

Community engagement in Guinea

In Guinea, EGA's social and human rights impact assessments[77] have confirmed that no indigenous people[78] are likely to be affected by our operations. However, areas of our bauxite mine's concession area, as well as the land required for its associated port, rail and other infrastructure facilities, overlap with pre-existing villages and communities.

As part of the assessment process we conducted during the planning phase, we confirmed that our project required the resettlement of more than 270 households. Land acquisition, compensation, community engagement and resettlement plans were all prepared in accordance with IFC's Environmental and Social Performance Standards to ensure that any disruption was minimised and people's lives were not adversely affected.

We have been open and transparent in this process, engaging with communities in advance to ensure we meet their needs while making all resettlement action plans publicly available via the IFC[79] website.

We have established several committees uniquely focused on working closely with affected communities and local authorities throughout the resettlement planning and implementation process, to identify potentially vulnerable groups, witness compensation payments and advise on resettlement site planning and housing design.

Despite the engagement challenges posed by the pandemic, in 2021, we held 843 engagement forums, engaging with over 3,318 local community members, keeping them informed of our planned activities, the potential for foreseen impacts, proposed mitigation activities and to help GAC to identify projects that could positively contribute towards an improved quality of life, beyond just impact mitigation.

To date, we have built 489 new houses, 13 new schools, eight new health facilities, 77 new groundwater boreholes, 601 solar pumping devices, and protected over 100 hectares of agricultural land from saltwater intrusion. All of our community relocation projects also include livelihood restoration measures focused on land-based means of support in-line with the rural and agricultural setting of the area.

In 2021, as part of our resettlement action plan, we completed the construction of a new resettlement village in Sinthiourou Thiouladji. The village includes 41 new homes, a school, solar-powered freshwater pumping system and sanitary provisions. Feedback so far from the residents of the new village, and the local authority has been positive.

We also assisted 210 cow-herders with the relocation of more than 3,075 cattle, identifying suitable alternative grazing sites, helping with livestock vaccination, providing water supplies for animals, as well as the construction of night holding areas and shelters.

[77] In addition to our human rights impact assessment in Guinea, we also conduct human rights impact assessments for new projects in the UAE in accordance with the ASI Performance Standards.
[78] As defined by IFC Performance Standards.
[79] For more information, please visit the IFC Project Information Portal website: https://disclosures.ifc.org/project-detail/ESRS/24374/guinea-alumina-corporation

Livelihood restoration and social investment projects are identified through community-engagement forums and overseen by a steering committee including representatives from local communities[80] and the prefect of Boké. Projects undertaken in 2021 included:

- The creation of market gardening pastures, with practical support on installing wire fences and constructing water storage basins, and advice on sowing crops and crop maintenance. The project promoted the self-employment of 116 young people and women in four localities, producing six tons of vegetables in the first year.
- An agricultural project developing land for pineapple cultivation for three communities. More than 50 members of the community received training on agricultural technical techniques such as crop monitoring and maintenance activities. The first crop of pineapples is anticipated for 2023.
- A community-based nurseries project to provide native species necessary for GAC's rehabilitation needs, generating a viable business with revenue for approximately 60 young men and women[81]. More than 100,000 plants have been prepared by these community members ready to be used during GAC's rehabilitation plans for 2022.
- A beekeeping project where community members received ten hives, protective equipment and training sessions in honey harvesting techniques and hive maintenance.
- The creation of agroforestry parks, enabling the community to produce young plants to be used as fertiliser in agricultural fields.
- Training on financial management, such as the drawing up of farm operating accounts and how to open a bank account.
- A village poultry farming project, supporting community members on the monitoring and maintenance of chicken coops.
- The construction and operation of three smoking rooms for locally caught fish, coupled with training on health, safety, hygiene, marketing, sales and business management as well as fish smoking techniques. The project supplies smoked fish to local markets, including the GAC canteen.

> **We are sincerely satisfied with this project for the income that the nursery generates and for the usefulness of the plants in the rehabilitation of our nature.**

Abdoulaye Kante
Chairman of Forest Nursery

[80] Local communities include resettled community groups as well as other communities within Boké and Kamsar.
[81] 60 per cent of whom were women

Community health

Since GAC first embarked on our mining project in Guinea, we have run health awareness campaigns, reaching more than 5,000 people across dozens of surrounding local communities. Themes for these campaigns are designed to address the specific needs of the community and are therefore planned in close coordination with the community. In 2021, our principal focus areas were providing educational information and raising awareness concerning malaria and COVID-19.

Our 2021 malaria health campaign included the distribution of more than 380 mosquito nets for 313 households, in the villages of Bélikindi and Filima.

Supporting local schools

In 2021, we helped distribute donations of sanitiser, face masks and other COVID-19 prevention materials as well as IT equipment for use by schools in the Boké region. Donations were provided by EGA and Abu Dhabi Ports and reached a total of 28 schools.

Improving career opportunities

Since 2014, GAC has trained more than 600 people from communities in Guinea through a series of vocational programmes designed to improve opportunities and career prospects, including by giving people the skills to start their own businesses.

In 2021, in collaboration with the development finance institution, in collaboration with the German Investment Corporation, DEG, we opened a USD 1 million advanced automotive training centre, located in the town of Boké near GAC's bauxite mining concession. The centre will support local Guineans seeking a future career in mechanics. The 25 students from the centre will graduate in 2022, including five local women.

Highly-capable mechanics are highly sought after and valuable employees in the Guinean mining industry. Some graduates from the automotive training centre are expected to choose to start their own vehicle repair businesses, contributing to broader economic development and creating employment opportunities for others.

We will also be encouraging graduates of the advanced automotive training centre to apply via tender to supply GAC with vehicle repair services in the future.

Also, in 2021, we initiated a new business management and enhancement project providing training for 154 people from local communities who received personalised coaching and support on how to develop local businesses specific to their communities. The project included the creation of opportunities for savings and solidarity lending to support local entrepreneurship.

We also continued with our long-running support of the Belikindi youth cooperative, who in 2021 trained a further 32 young women in modern sewing techniques for the production of personal protective equipment (PPE) used in the mining industry. Many of the graduates from these courses have subsequently gone on to take apprenticeships with local businesses.

> I have found the programme to be very good as it has provided a good opportunity for me, and I would like to say thank you.

Marie Victorine Lama
Trainee of the Boké Advanced Automotive Training Centre

> We are satisfied with the support of GAC, all the girls have now have a job and are starting to benefit. We remain grateful.

Kadiatou Bah
Chairman of COBEC - Sewing Startup

Recognised for excellence for our contribution to the community

Every year the A&M Business Group (a locally based communications organisation) distributes awards for positive socio-economic impacts in Guinea.

In 2021, GAC received an award as the best performing mining organisation, for our efforts associated with positive community impacts.

A market gardening start-up supported by GAC as part of our social investment programme also received an award for the best performing agricultural company in Tanene.

Security practices in Guinea

Identified as part of our human rights risk assessment, we seek to reduce and eliminate negative interactions between our security personnel and members of the local community. Security for our operations is provided by both an external security provider and our own security staff, all of whom have been trained to follow the Voluntary Principles on Security and Human Rights[82].

Crisis scenarios and security responses that could create or exacerbate community tensions are reviewed with planned mitigation measures to ensure GAC understands its role and that staff are appropriately trained. Training components include relevant Guinean and international laws and the UN principles concerning the use of force and arms.

[82] Details available at: https://www.voluntaryprinciples.org/

Community engagement in the UAE

In the UAE, EGA has a dedicated corporate social responsibility team that engages with local communities[83] to gather feedback and understand how we can best contribute to their quality of life. This is conducted through various channels, including meetings with regulatory authorities and non-profit organisations. In 2021, we conducted 14 community engagement projects in the UAE covering topics such as environmental awareness, COVID-19 prevention, sporting and educational events.

In 2021, EGA received an award from the Dubai Chamber of Commerce and Industry for our 2020 community engagement projects.

> Engaging with local communities helps EGA address not only our community needs, but also creates opportunities, improves, and enriches the lives of people in our societies. At EGA, social responsibility is a voluntary contribution to the well-being of communities in which we operate in and our broader society. It gives me great pride to be part of our efforts that create positive change.

Rania Tayeh
Senior Manager - Corporate Social Responsibility

School outreach programme

EGA first launched the school outreach programme in 2017, collaborating with the Ministry of Education[84] and working with Edutech[85] to promote awareness and understanding of the importance of science, technology, engineering and mathematics-related subjects (STEM) among UAE high school students.

In 2021, the programme provided support to Abu Dhabi public schools in the transition back

to 'in-school learning' after over a year of virtual classrooms. EGA assisted in this transition by providing COVID-19 personal protective equipment and awareness materials to 4,600 students in Abu Dhabi including the attendees at the Al Samha, Al Falahiya, Al Rahba and Al Bahia schools.

Also, in January 2021, EGA collaborated with Emirates Foundation and Tadweer to hold a virtual workshop for members of nearby communities in Abu Dhabi to share best practices for healthy living during COVID-19. Around 150 people from EGA and the local community participated in the workshop.

INJAZ UAE

INJAZ UAE is a member of Junior Achievement Worldwide, one of the world's largest not-for-profit business education organisations, reaching over 10 million students each year in 121 countries. It links the business community, educators, and volunteers, working together to empower young people to plan their professional futures and make smart academic and economic choices.

Early in the 2020–2021 academic year, EGA hosted the INJAZ Career Success programme, benefitting a total of 293 students. Several EGA employees from various departments volunteered to participate in this innovative programme.

[83] There are no indigenous people89 (as defined by IFC Performance Standards) within the vicinity of any of our facilitates in the UAE.
[84] In 2021, the Emirates Schools Establishment was established as an independent government entity that manages and operates public schools in UAE. It oversees the implementation of policies, strategies, and standards related to the education sector.
[85] Transforming education with hands-on and technology-based learning solutions in educational campuses and organisations across the Middle East.

Ambassador Programme

EGA launched its Ambassador Programme in 2019, sending young engineers and professionals to UAE universities to explain to students how the STEM subjects they are studying are applied in industry. The aim of the programme is to inspire STEM students to pursue careers in UAE industry.

In response to the COVID-19 pandemic and to support distance learning at UAE universities, the Ambassador Programme continued to provide online engagement and a programme of virtual seminars throughout 2021. By year-end, more than 1,500 students had participated in online seminars and Ambassador Programme events including students from the American University of Sharjah, UAE University, Khalifa University and the Higher Colleges of Technology.

Volunteering

EGA also supports employee volunteering activities through its 'Corporate Social Responsibility Club', which is open to any EGA employee who would like to volunteer their time during or outside working hours.

In 2021, 43 EGA volunteers actively participated in community improvements or engaged with students in our education and youth development programmes.

> I am honoured to have been an EGA Ambassador. Although COVID-19 has limited face-to-face interactions, distance learning has enabled us to expand the programme by taking it virtual. We have been able to reach more young people than ever before.

Abdulrahman Rahmani
General Superintendent – Casting Services

Figure 27: Volunteering efforts in the UAE

Community grievance management

EGA has a formal grievance mechanism at all of our locations in both the UAE and Guinea, giving anyone within the community the opportunity to raise concerns or queries associated with our environmental and social performance. Our aim is that our grievance process provides the community with easy access and enables us to find effective solutions to any complaint quickly.

In the UAE, we have a dedicated phone line accessible 24/7 with details published on our website[86]. Calls are monitored and picked up by our in-house dedicated corporate social responsibility team. In 2021, EGA in the UAE did not receive any complaints from the community.

Dedicated hotline for community feedback for complaints in the UAE

+971 2 509 4535

In Guinea, we have established a network of community liaison officers within local communities who are able to record any grievances and raise them directly with GAC's community relations team.

In Guinea, our community relations team manage all community complaints. We register all complaints and investigate them to understand the problem and find the best solution to resolve issues promptly. In 2021, we received 27 grievances, 20 of which were substantiated and closed out during the year. Substantiated grievances were mainly associated with environmental concerns such as dust generation and the management of surface water runoff. These complaints were resolved, in collaboration with our environmental specialists, elected officials and members of the prefectural compensation resettlement committee. Our target is to address substantiated complaints within 30 days, in 2021 our average resolution time was 21 days.

[86] For more information, please visit: https://www.ega.ae/en/contact-us/

Working at EGA

There is nothing more important at EGA than the people who work here. A positive work environment, professional fulfilment, equity, well-being and teamwork are among the most important attributes for any business to prove successful.

Our goal is to attract and retain top talent by offering competitive salaries and benefits. We want to provide high-quality recruits with growth opportunities and provide them with a positive work environment to retain talented employees for the long term.

To ensure employees' overall happiness and well-being, EGA offers a variety of benefits. Our employees are entitled to life insurance, health insurance, medical checkups and compassionate leave.

In Guinea, our human capital policies and procedures are aligned with ILO[87] and IFC[88] Performance Standards. Most of our employees are members of one of the national trade unions for the mining sector, and 100 per cent of GAC's employees are covered by collective bargaining agreements[89]. GAC has established a rapport with the unions in the company and meets with their representatives quarterly to resolve any potential work-related issues.

Freedom of association and collective bargaining are restricted under UAE law[90]. Nevertheless, at all levels of our organisation, we encourage open communication and support colleagues in sharing their concerns and ideas for improving our working environment and the well-being of our staff. In the UAE, we also provide a dedicated employee care centre managed by a contracted third party. This facility provides assistance to all our staff and helps resolve queries, concerns or issues associated with employment at EGA.

[87] International Labour Organisation
[88] International Finance Corporation
[89] In Guinea, minimum notice periods regarding operational changes and provisions for consultation and negotiation are specified in collective bargaining agreements.
[90] Federal Law no. 3 of 1987 (as amended).

> At EGA, we are committed to developing all of our people to help them be the best they can be, every day. By investing in people's capability, we unlock our full potential, as we strive to become a future-ready, talent driven organisation.

Kamball Schafferius
Director - Talent Management

We value our employees' opinions and actively seek feedback through employee engagement. In the past, we have regularly sought employee feedback through an employee engagement survey called 'Mashura'.

In 2021, we changed our approach and started conducting a regular "Mashura Pulse" survey every six months that focuses on specific areas of engagement.

We issue the survey in seven languages and gather feedback on subjects including sustainable engagement, leadership direction, efficiency, collaboration, safety, line management, EGA culture and values, personal development, retention, reward and recognition, and facilities.

We use an external provider specialising in engagement surveys to administer all our Mashura Pulse surveys, thereby ensuring complete impartiality and confidentiality.

Following each survey the main findings are shared with our executive committee as well as with all leadership teams in all functions. Each function is then supported with an action planning workshop whereby they identify and lead actions for improvement, with regular updates given to the executive committee.

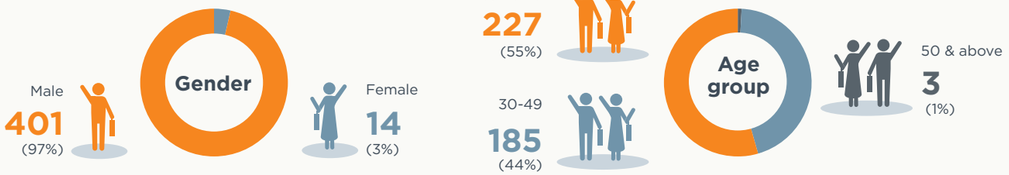
In 2021, we gathered feedback from more than 6,000 staff across EGA and continued to develop and implement actions identified from findings, including:

- Enhanced learning opportunities, related leadership programmes and access to a range of online learning platforms to foster a mindset of career growth and ownership.
- Improved visibility of departmental updates via newsletters, townhalls, team events and Q&As fostering more transparency.
- A variety of team building activities focused on collaboration, knowledge sharing and relationship building.
- Increased dialogue on topics such as diversity and inclusion related to the values of integrity and fairness.
- Improved leadership visibility and engagement with the rest of the organisation via walkabouts, open-door practices and visits to the shop floor, giving employees opportunities for direct communication on thoughts and ideas.

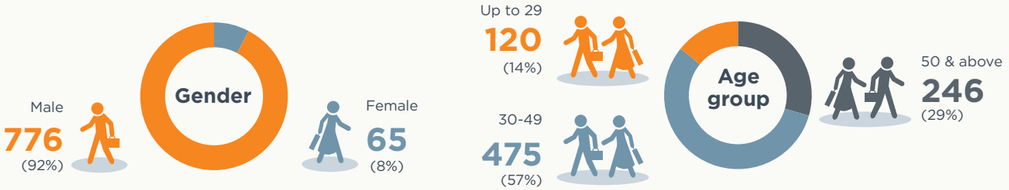
Figure 28: Employee retention in the UAE

Total new employees hired and turnover

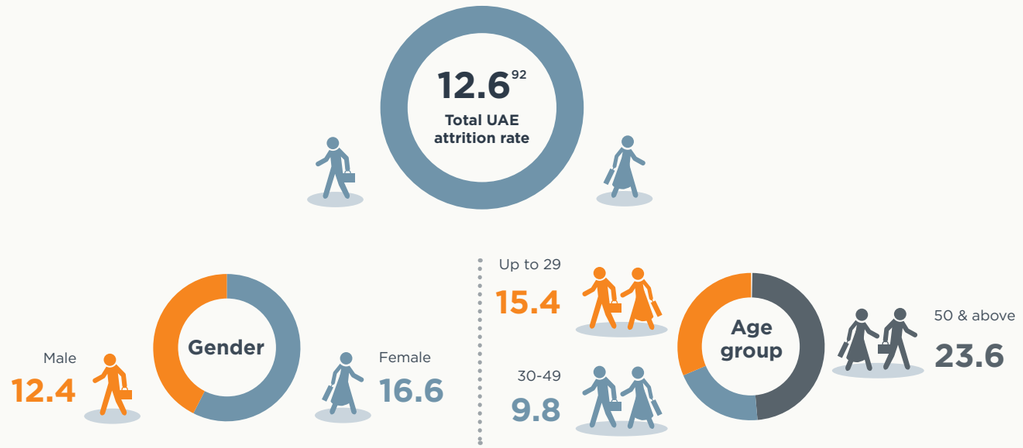
Total new employees hired



Total employee turnover



Attrition rate (%)[91]

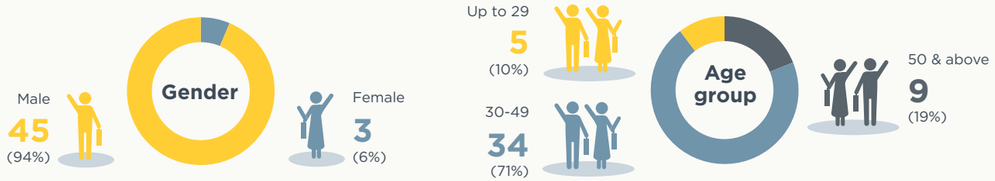


[91] All employment statistics are calculated based on the number of FTEs as of Dec 31st 2021. The exception being the attrition rate which is calculated based on the sum of total FTEs for each month of the year, divided by 12.
[92] In 2021 EGA conducted a workforce rightsizing exercise that included both voluntary and involuntary redundancies. This resulted in an increase in attrition rate compared with 2020. Excluding this rightsizing exercise, our 2021 attrition rate was 7.27.

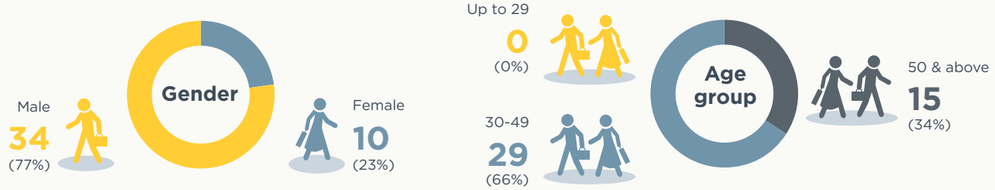
Figure 29: Employee retention in Guinea

Total new employees hired and turnover

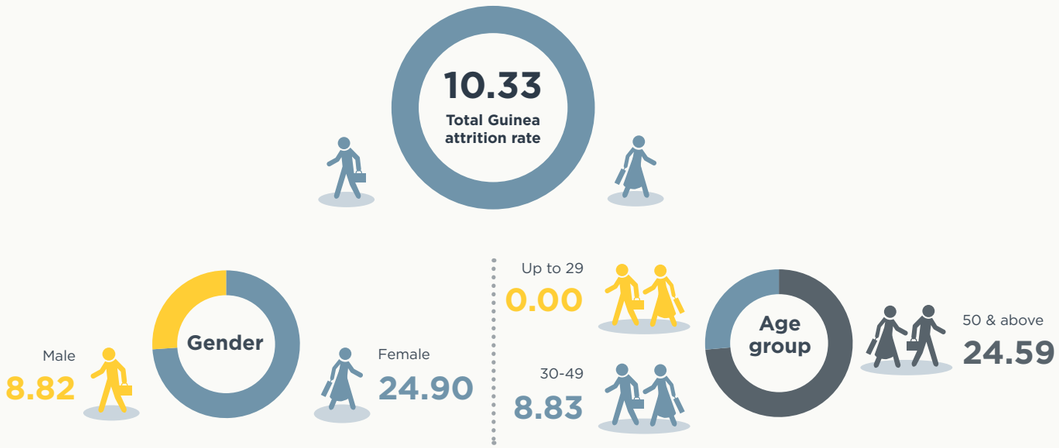
Total new employees hired



Total employee turnover



Attrition rate (%)[93]



[93] All employment statistics are calculated based on the number of FTEs as of Dec 31st 2021. The exception being the attrition rate which is calculated based on the sum of total FTEs for each month of the year, divided by 12.

Our UAE residential facilities

At our residential facilities in the UAE, we provide accomodation for more than 3,000 employees and contractor staff that work at EGA's facilities.

Our residential facilities in Jebel Ali have been in operation since the early days of operations in Dubai. However, at the height of the COVID-19 pandemic in April 2020, the Government imposed travel restrictions between Abu Dhabi and other emirates to mitigate the spread of the virus. With a number of our Al Taweelah-based staff and regular contractors living outside the Emirate of Abu Dhabi, we chose to provide accommodation in Abu Dhabi to ensure people could still get to work. Consequently, we rented accommodation on Al Saadiyat Island in Abu Dhabi, approximately 45 minutes from our operations in Al Taweelah, and assisted both our employees and contractor staff to move in.

With the lingering threat of the pandemic and potential for further border closures, we have continued to manage both our original residential area in Jebel Ali in Dubai as well as newly rented accommodation on Al Saadiyat Island in Abu Dhabi.

> "I have been enjoying the hospitality of EGA since June 2013, moving to Saadiyat in 2020. The food provided is simply superb with regular changes in the menu with ethnic taste, and monthly theme night dinners. The housekeeping, maintenance, security and services at Saadiyat are extraordinary, and the staff are very cooperative and friendly."

Rajeev Rajappan
Operator - Port Operations

While some of the new Al Saadiyat residents had been living in our accommodation in Jebel Ali, others had been living with their families elsewhere in the UAE. For many, moving from their homes to Al Saadiyat Island has been challenging.

To ensure that the new residential facilities at Al Saadiyat are as accommodating as possible, we have proactively gathered feedback on how best to improve and maintain these facilities. In response to resident feedback, in 2021, we have continued to provide maintenance teams available on call-out seven days a week, provided free laundry services with delivery three times a week, overhauled air conditioning systems, improved pest control, increased available transport services from Al Saadiyat Island to recreational destinations in Abu Dhabi and continued to provide free internet access to make sure all could keep in touch with loved ones throughout 2021.

At our recreational facility in Jebel Ali, we have always provided substantial recreational facilities for residents, including a swimming pool, golf course, tennis courts, and cricket ground. We also provide residents with a transportation service to reach recreational destinations in Dubai. We wanted to ensure similarly sufficient recreational facilities were available at the new Al Saadiyat Island facilities and have provided access to a football pitch, gym, basketball courts, indoor recreational centre and a number of other facilities.

Due to potential transmission risk and associated local regulations, access to some recreational facilities at Jebel Ali and Al Saadiyat Island has been limited. However, as 2021 progressed and restrictions were lifted, we opened up recreational facilities wherever we could, while limiting capacity to maintain social distancing. This included reopening the basketball court and extending the gym opening hours.

In both residential areas, we implement extensive COVID-19 health and safety protocols to protect our residents. Additional janitors have been employed to ensure accommodation areas and shared facilities were regularly disinfected. Training was also provided to all residents on the risks of COVID-19 and how to avoid infection.

At both sites, all residents have access to free, 24-hour medical care at our onsite clinics staffed by qualified doctors and nurses. Our safety teams conducted regular inspections of both residential areas to ensure disinfection standards were maintained and that adequate facilities were in place to encourage social distancing.

> “I have stayed at the residential site since joining in April 2018. I am really impressed by the onsite recreational facilities and the service extended to us is top class.”

Rahul Keezhpattillam
Senior Operator - ATA Production

Our Jebel Ali residential area facilities include:

- Swimming pool
- Golf course
- Cricket pitch
- Gym
- Squash courts
- Billiards
- Hockey court
- Badminton courts
- Football pitch
- Tennis courts
- Basketball court
- Volleyball court
- Music room
- Gardening Club
- Fishing pier
- Local shop
- BBQ area
- Laundry service
- Travel desk
- 24-hour concierge
- Free Wi-Fi
- Allotments
- Clinic
- ATM
- Post office

Our Al Saadiyat Island residential area facilities include:

- Football pitch
- Tennis court
- Basketball court
- Gym
- Four TV rooms
- Indoor recreation room
- Local shop
- Midnight Snack Bar
- Barber shop
- Laundry service
- 24-hour concierge
- Free internet service
- Clinic

Diversity and inclusion

Our employees come from countries across the world to join EGA. We are a global organisation with a global workforce comprised of over 50 nationalities. At EGA, we embrace the different perspectives, ideas and cultures that come with such a diverse workforce. We are also supportive of the goals of both Guinea and the UAE to develop the skills and employability of local citizens in order to maximise their potential contribution to the national economy.

In both Guinea and the UAE, we have set local recruitment objectives to increase the number of locals in our workforce. Our Emiratisation and Guineanisation programmes provide clear progression pathways through structured development and training programmes, designed to attract, develop and retain UAE and Guinean nationals.

Of our 6,535 employees in the UAE, 1,139 are UAE nationals, representing 17 per cent of the workforce. In Guinea, of our 434 employees, 361 are Guineans representing 83 per cent of the workforce. In Guinea, we also give priority to hiring people who have been directly impacted by our operations wherever the right skill set is available.

83% of our staff at GAC are Guinean nationals

Figure 30: Supporting local recruitment (UAE)

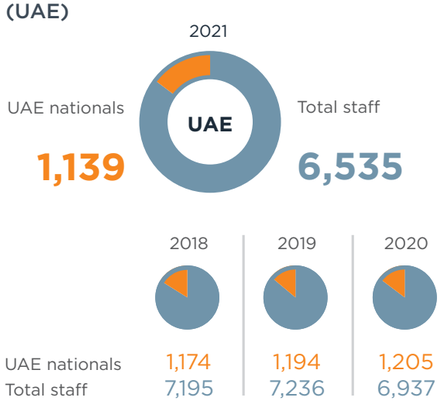
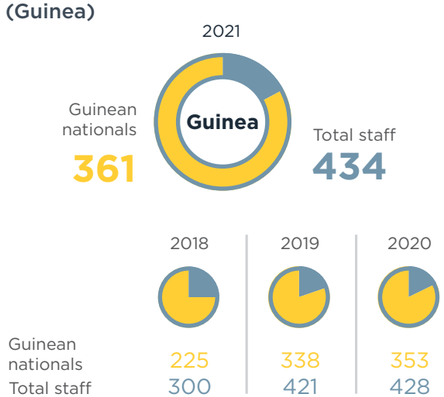


Figure 31: Supporting local recruitment (Guinea)



At EGA, we recognise that the metals and mining industry has historically been a very male-dominated sector capable of creating a non-inclusive work environment for female employees. We are seeking to challenge this archetype, with plans to create a more inclusive workplace and increase the female representation among our workforce.

In 2021, 18 per cent of all management and supervisory roles in the UAE were held by women and we have set ourselves the target of increasing this figure to 25 per cent by 2025.

In 2021, we rolled out a mentoring programme focused specifically on women's personal development and career growth within EGA while in 2022, we will be building on our gender equity and women empowerment programme to further address employment practices and training opportunities as well as the awarding of contracts.

Our Code of Conduct[94] expressly prohibits any form of discrimination based on gender. Our basis for hiring is built on a consistent, fair and merit-based approach in accordance with equal opportunities regardless of gender. Also, our remuneration structure is identical regardless of gender.

We support new, expectant and nursing mothers (recognising the potential risks from heavy industry) while also providing maternity leave either above or in accordance with statutory requirements[95].

18% of management and supervisory roles in the UAE are held by women

> The EGA Women's Network solidifies its roots in empowering EGA's community of women, harnessing their talent and amplifying their collective voice to shape an inclusive environment. It's a powerful experience to watch the momentum build to achieving major milestones fuelled by our women's unlocked potential.

Sara Galadari
Senior Officer - Purchasing

For future years' sustainability reports we will be disclosing both further measures taken and the effectiveness of these measures to promote gender equity at EGA.

EGA's Women's Network

EGA Women's Network was first established in 2020 to advocate for the empowerment and development of women within EGA.

During 2021, the Women's Network has hosted workshops aimed at aiding women's professional and personal growth, highlighted female role models through panel discussions and spotlight sessions, as well as connecting EGA's high-achieving women.

[94] Available at https://www.ega.ae/en/about-us/our-policies-and-certifications
[95] In Guinea, maternity leave is also established through collective bargaining agreements, reflecting the local labour code.

Figure 32: Employee diversity in the UAE

Senior management hired from the local community[96]

45%

UAE nationals on the Executive Committee

42%

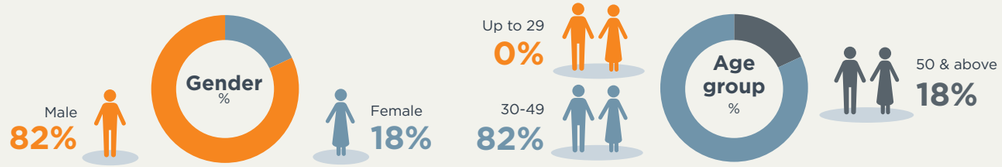
UAE national senior management (grade F & above excluding ExCo)

Total employee workforce by gender[97]

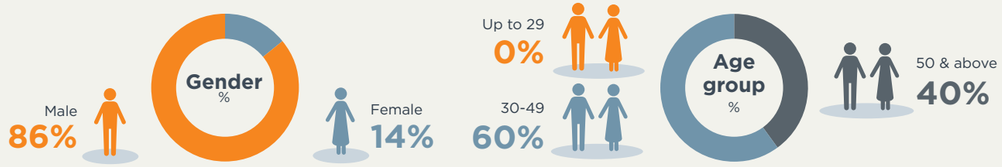
[96] Grade F and above are considered 'senior management' and includes managerial, director and vice president roles.
[97] No part-time employees during the reporting period. There were 6,163 full-time male and 372 female employees during reporting period.

Employee category

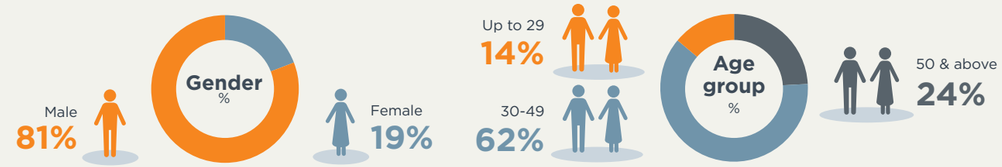
Executive Committee



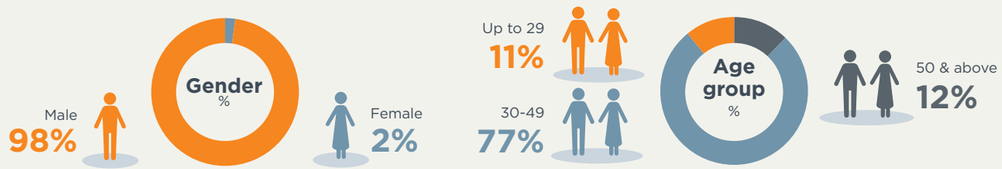
Senior management (excluding Executive Committee)



Middle management[98]



Non-managerial staff



[98] Middle management includes all supervisory positions.

Figure 33: Employee diversity in Guinea

Senior management hired from the local community[99]

17%

Guinean on the Executive Committee

36%

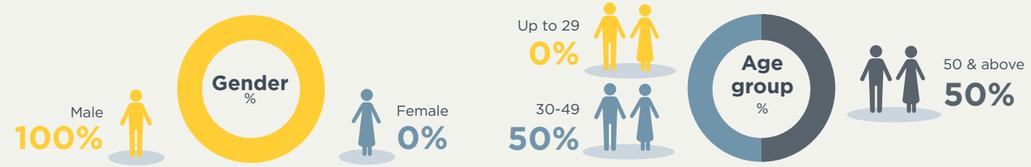
Guinean senior management (grade F & above excluding ExCo)

Total employee workforce by gender[100]

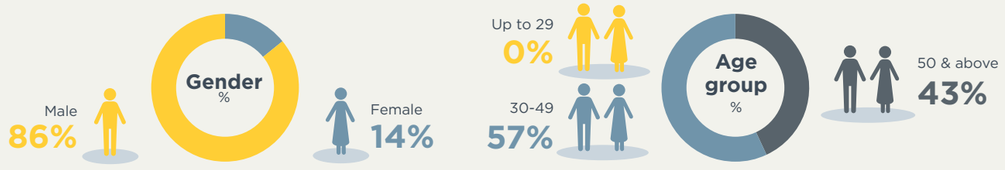
[99] Grade F and above are considered 'senior management' and includes managerial, director and vice president roles.
[100] No part-time employees during the reporting period.

Employee category

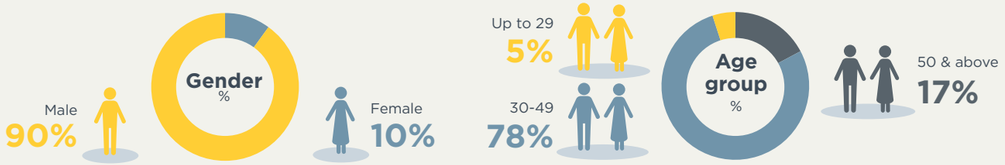
Executive Committee



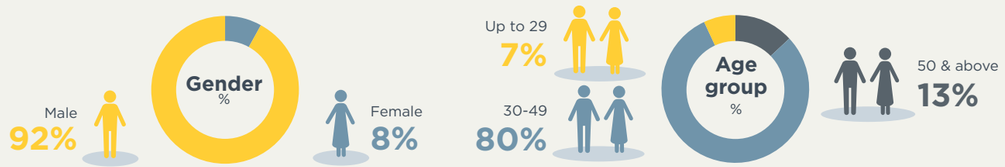
Senior management (excluding Executive Committee)



Middle management



Non-managerial staff



Employee development

EGA is committed to the development of all employees. We offer a variety of training and development programmes to help employees reach their full potential. We believe that investing in our employees is essential to our success as a company.

Skills development and career planning are facilitated through EGA's Performance Management Framework, which is available to all of our staff[101]. Our aim is to provide a positive and fulfilling work environment and opportunities for employees to reach their full potential, thereby increasing job satisfaction and contributing to employee motivation and retention. EGA provides a wide range of training programmes to thousands of employees every year. Training is designed according to EGA's current and future requirements, current staff needs and planned career progression[102].

In the UAE, EGA's Emiratisation programme includes internships, summer work experiences for high school and university students, our Eadad[103] programme, scholarships for employees and students, a national trainee programmes[104] and a graduate trainee programme. Graduates receive 18 or 24 months of training to equip themselves with the tools needed to prepare young Emiratis for technical roles in EGA.

In 2021, we established a dedicated training team in Guinea. This team is tasked with further understanding the training needs of our staff in Guinea and establishing suitable budgets and training programmes to best meet these needs.

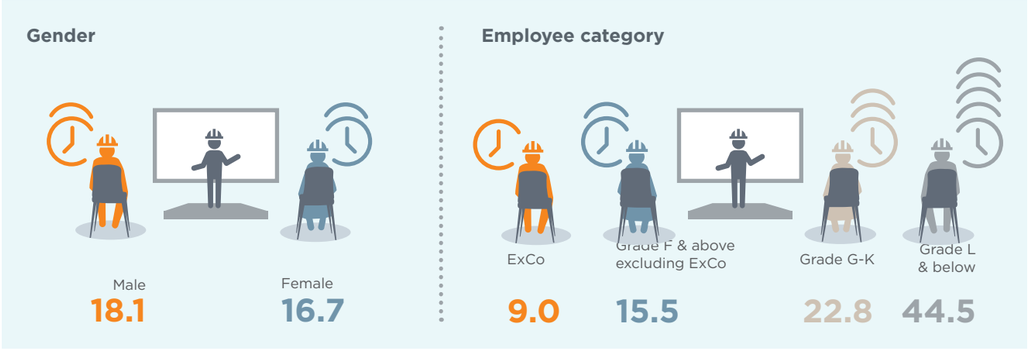
> "EGA's scholarship programme creates an opportunity for talented students to pursue their dream career, in a place that has a unique environment and state of the art equipment's and technologies. This builds an empowered youth who has the ability to craft the company's and country's future."

Khalid Kazim
Emiratisation Manager

> "I would like to thank EGA for helping me to achieve my dream by providing me with the opportunity to study the field I want, and to work in a place that I see myself best in."

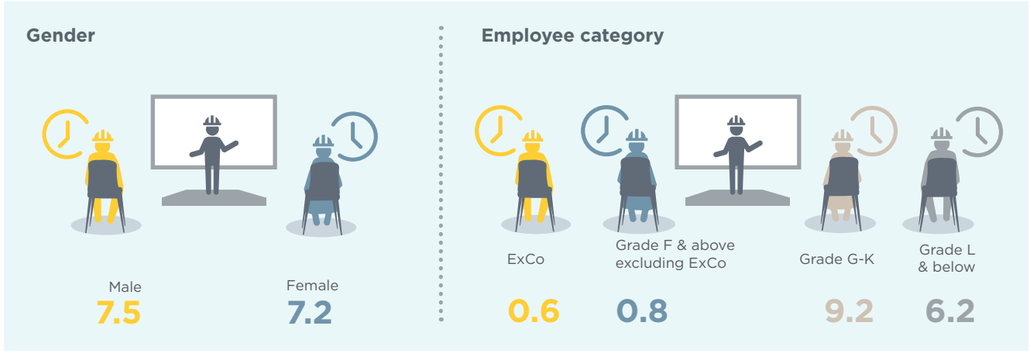
Nouf Al Hammadi
Engineer I - Process Control

Figure 34: Average hours of employee training in the UAE



[101] Staff meet with their line managers to set goals in a performance agreement at the start of each year. Progress and success in achieving these goals is assessed in interim and full-year review meetings.
[102] All technical training programmes for the operational facilities in Dubai are accredited by the Knowledge and Human Development Authority.
[103] Eadad is an Arabic word meaning preparation and includes training opportunities for fixed periods.
[104] A government initiative to promote opportunities for UAE nationals in the labour market.

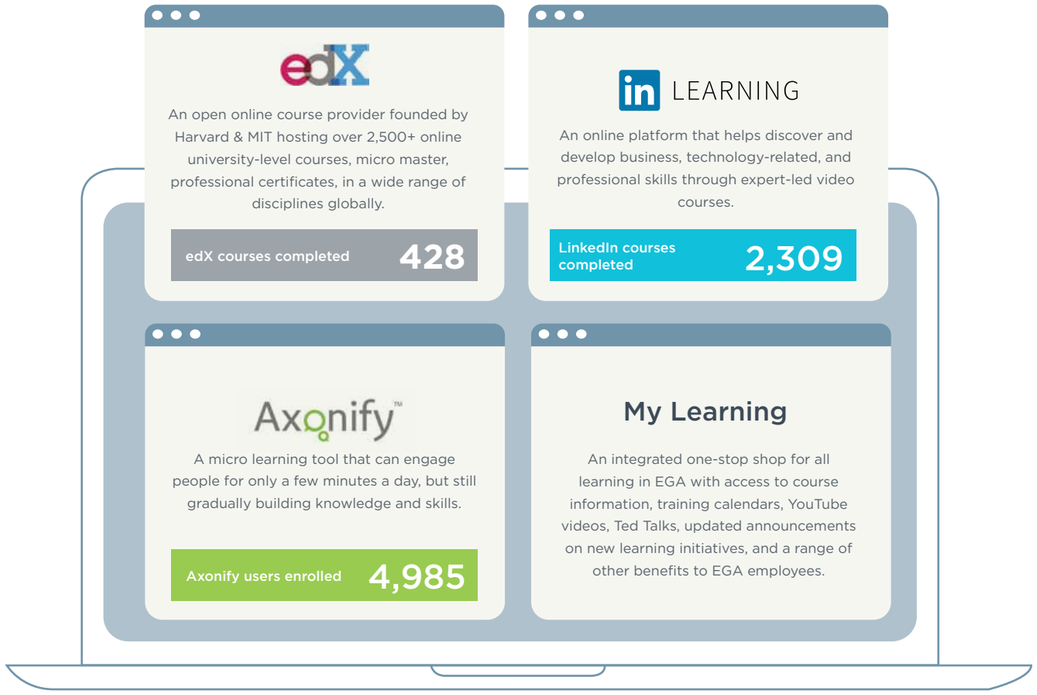
Figure 35: Average hours of employee training in Guinea



COVID-19 presented several risks that limited in-person training opportunities during 2021. Nevertheless, our Learning and Development team have converted many of our in-person training modules into virtual instructor-led training.

We also continued with our various online learning platforms such as edX, LinkedIn Learning, Axonify and 'My Learning'.

E-learning



04

Good governance

Good governance

Corporate governance

EGA's corporate governance practices have been designed to provide a foundation for value creation for all its stakeholders and to ensure suitable control mechanisms underpin the business's sustainable and responsible long-term growth.

The Board provides the leadership necessary for EGA to meet its business objectives within a robust framework of internal controls. Its mandate is to provide entrepreneurial leadership and to oversee management.

We continue to have a strong mix of talented individuals on the Board with a depth of experience from a range of industries. This helps create an effective Board which is not only able to offer an external perspective on the business, but also constructively challenge senior management, particularly when developing the Company's strategy and in their performance.

Our board comprises 12 members, 10 Non-Executive Directors, 2 Executive Directors, one of which is our Managing Director.[105]

Independent and non-Executive Directors bring an independent mindset and a variety of backgrounds and experience around the Board table and challenge the executive management constructively.

As part of a robust system of internal controls, the Board has delegated certain authorities to several sub-Board Committees as well as EGA's executive management. Delegation is subject to financial limits and other restrictions, above which matters must be referred to the Board. Sub-Board

committees include our Technical and Projects Committee, Finance and Commercial Committee, Audit and Risk Committee and Human Capital Committee.

As a member of the Board of Directors and the most senior executive at EGA, our Managing Director is responsible for the achievement of the Board's strategic objectives and aligning the Executive Management's work with the overall vision of the Board for EGA's business and future projects.

Our Chief Executive Officer is responsible for managing EGA's ongoing operations and business, leading the Executive Management team and developing the Group's strategy in conjunction with the Managing Director and the Board. The CEO is supported at the management level by several Executive Committees including the Executive Management Committee, Risk Management Committee, Strategic Procurement Committee, Executive Tender Committee, Procurement Tender Committee and ESG Committee.

[105] For full details please refer to the leadership pages of our website https://www.ega.ae/en/about-us/our-leadership

Management responsibility for sustainability

Our EVP for HSSEQ&BT[106] reports directly to the CEO and is responsible for overseeing and implementing EGA's sustainability strategy. Our EVP for HSSEQ&BT brings sustainability-related risks and opportunities to the attention of the CEO, EGA's Board and Sub-Board committees. In 2021, our EVP for HSSEQ&BT presented our Net Zero Roadmap to EGA's Board for approval.

Our Sustainability Manager reports directly to our EVP for HSSEQ&BT and provides functional expertise and counsel to direct the development, implementation, and continuous enhancement of EGA's sustainability strategy. Our Sustainability Manager is also responsible for overseeing improvements that align our organisations with corporate commitments, stakeholder expectations and international sustainability programmes, including our alignment with the Aluminium Stewardship Initiative.

But, to truly embed sustainability within our organisation and achieve our new bold aspirations requires involvement from all areas of our business, and for all our entire executive leadership team to take an active role in EGA's sustainability agenda.

In 2021, EGA established its first-ever ESG Committee comprising our full executive leadership team[107], including our:

- Chief Executive Officer
- Chief Digital Officer
- Chief Executive Officer of Guinea Alumina Corporation
- Chief Financial Officer
- Chief Marketing Officer
- Chief Supply Chain & Business Development Officer
- EVP, Human Capital
- SVP, Corporate Affairs
- EVP, HSSEQ&BT (Vice Chair)
- EVP, Midstream
- EVP, Upstream & Capital Projects
- SVP, Casthouse & Global Technical Sales and Aftersales Support
- General Counsel, Head of Compliance and Company Secretary

The Committee is chaired by our CEO, with our Executive Vice President, HSSEQ&BT as co-chair and our Sustainability Manager as Committee Liaison. The Committee is tasked with taking a forward-looking perspective, anticipating changes in stakeholder expectations, regulatory requirements, market position, reputational risk, and EGA's values, while promoting a strong sustainability culture across the organisation.

[106] Executive Vice President for Health, Safety, Sustainability, Environment, Quality & Business Transformation
[107] For full details please refer to the leadership pages of our website https://www.ega.ae/en/about-us/our-leadership

Embedding ethical practices

At EGA, we believe good ethics are the foundation of good business. Unethical behaviour can severely damage the trust stakeholders place in an organisation and compromise its ability to meet its objectives.

EGA is committed to embedding ethical practices throughout our business, and we seek to build mutual trust with our customers, suppliers and communities, by working honestly and ethically.

Our in-house Legal, Ethics & Business Integrity department implements a risk-based ethics and compliance programme, reflecting the specific challenges encountered within our industry and in the countries in which we operate. Our team oversees the identification of integrity risks and associated controls across all of our operations. We apply our standards across all areas and geographies and continue to look for ways to improve how we detect, prevent and respond to ethics and compliance issues.

> Doing the right thing, in the right way. It's about integrity.

Ian Moolman
Associate Manager - Ethics & Business Integrity

At EGA, everyone is responsible for fostering a culture of ethical behaviour across all departments and operations.

EGA's Code of Conduct

EGA's Code of Conduct establishes and communicates the standards that guide our behaviour.

Our Code of Conduct applies to everyone at EGA and covers 24 compliance issues. These include treating people with respect (prohibiting harassment, discrimination, and retaliation), anti-bribery and anti-corruption, complying with competition laws, and behaving with integrity in all dealings with customers, partners, suppliers and governments[108]. We make our Code of Conduct available to all by publishing it on our website[109].

Anti-corruption and anti-bribery

EGA takes anti-bribery and anti-corruption compliance seriously and recognises the high levels of risk in some of the countries in which we operate. Bribery not only undermines the rule of law and the principles of free and fair competition but also has a stifling effect on businesses and commerce.

Regular risk assessments are a key part of an effective compliance programme and all our operations have been assessed for risks related to bribery and corruption.

Guinea remains a high-risk business environment in relation to bribery and corruption as identified by Transparency International's 2021 Corruption Perception Index[110]. In 2021, in addition to on-going integrity risk assessments, our team in Guinea conducted in-depth anti-bribery and anti-corruption (ABAC) risk assessments. Also, in 2021, we completed comprehensive fraud risk assessments across EGA.

[108] EGA does not involve itself directly or indirectly with any form of political or electoral activity.
[109] Learn more about the EGA Code of Conduct: https://www.ega.ae/en/about-us/our-policies-and-certifications
[110] For more information, please visit https://www.transparency.org/en/cpi/2021/index/gin.

> Our governance programme has an impact on our immediate environment. In the past few years, we have witnessed a clear evolution of mindsets and practices in and around our organisation, with everyone striving to meet our objectively high standards.

Alexios Kirillov
Chief Governance and Legal Officer-Guinea Alumina Corporation

Communication and training

EGA's Code of Conduct training is mandatory for all staff, including our Executive Committee. We deliver this training both as part of EGA's induction process for new joiners and as an annual 'refresher' course for all staff.

Our induction training introduces EGA's ethics and business integrity programme, addressing issues such as discrimination, harassment, corruption and fraud. It explains the multiple ways to report compliance concerns, how concerns are investigated and our non-retaliation policy.

Each year, our Code of Conduct 'refresher' training provides a specific focus on different topics. In 2021, this included harassment and discrimination, bribery, corruption, and misappropriation of assets.

During the year, as well as targeted training for various departments, we also provided training on conflicts of interest, ethical leadership, gifts and entertainment all through our micro-learning online platform, Axonify.

In Guinea, we continued to provide compliance-focused induction training to a number of contractor staff to increase awareness of EGA's values, our Code of Conduct, and to encourage staff to speak up if they suspect any illegal or unethical behaviour within our organisation.

Monitoring, reporting and how we respond

EGA's ethics & business integrity team consists of qualified lawyers and certified compliance officers. Our team investigates all concerns reported, either directly or through 'Your Voice'.

Your Voice

We encourage people to speak up if they have any compliance-related questions or concerns. 'Your Voice' is an independently operated reporting line that allows our employees, suppliers, contractors and others to report any possible violation of EGA's Code of Conduct, policies or applicable laws. It is available 24/7 in multiple languages and publicised within EGA and also appears on our website and supplier declaration.

8000 021 (UAE toll-free)
8123 (Guinea toll-free)

We have a strict policy of non-retaliation. Anyone reporting a concern in good faith is assured that they will be supported, regardless of the outcome of their report.

Our response to discrimination and harassment

In 2021, our ethics & business integrity team recorded a total of 21 cases of a "lack of respect", including instances of harassment and discrimination. Following investigation, six of these cases were substantiated, three in Guinea and three in the UAE.

All remedial actions associated with these substantiated cases have been completed and have included counselling and training, written and verbal warnings as well as formal disciplinary action. None of the identified cases warranted dismissal or contract termination.

Our response to incidents of corruption

In 2021, our ethics & business integrity team recorded a total of four reports of alleged corruption and/or alleged lack of controls to prevent corruption. On investigation, one case was substantiated.

The substantiated case involved an offer made by a non-EGA vendor to an EGA employee. This offer was declined and the employee duly reported the incident in line with our anti-corruption policies and procedures.

In 2021, there were no substantiated incidents of corrupt behaviour that originated from EGA employees.

Fines, judgments, penalties or sanctions

In 2021, EGA received no significant[111] fines, judgments, penalties or non-monetary sanctions for non-compliance with laws and/or regulations. We had no legal actions, threatened or ongoing, relating to anti-competitive behaviour or corruption and no violation of anti-competitive behaviour or anti-trust and monopoly legislation.

In 2016, EGA received a violation notice from the environmental regulator in Dubai regarding NO_x emissions from our power plant in Jebel Ali. This violation was a consequence of our use of older gas turbines. In 2021, following the commissioning of our new H-class power block, we have substituted older turbines and our NO_x emissions have reduced by 20 per cent. In 2022, we will be seeking to formally close this violation with the environmental regulator in Dubai.

[111] EGA paid one fine in 2021 amounting to USD 221,854. This fine was issued by the customs authorities in Guinea and was associated with goods imported into the country by one of our contractors that were not placed at the correct designated area at customs.

A responsible supply chain

An effective supply chain is essential to the competitiveness of our business. Responsible sourcing is a key commitment of our core policy which directly references the requirement for EGA's suppliers to adhere to our values.

Established in 2016, our Responsible Sourcing Standards detail the commitments we require from our business partners in relation to human rights, labour rights, environmental performance, conflict-free minerals, health and safety, and workplace integrity, including anti-corruption, anti-bribery, harassment, discrimination and worker welfare.

In 2021, 100 per cent of newly onboarded vendors signed up to EGA's Responsible Sourcing Standards[112].

Active vendors onboarded prior to 2016 are also being asked to sign up to EGA's Responsible Sourcing Standards. In total, of all active vendors engaged with EGA, 77 per cent have signed up to EGA's Responsible Sourcing Standards[113].

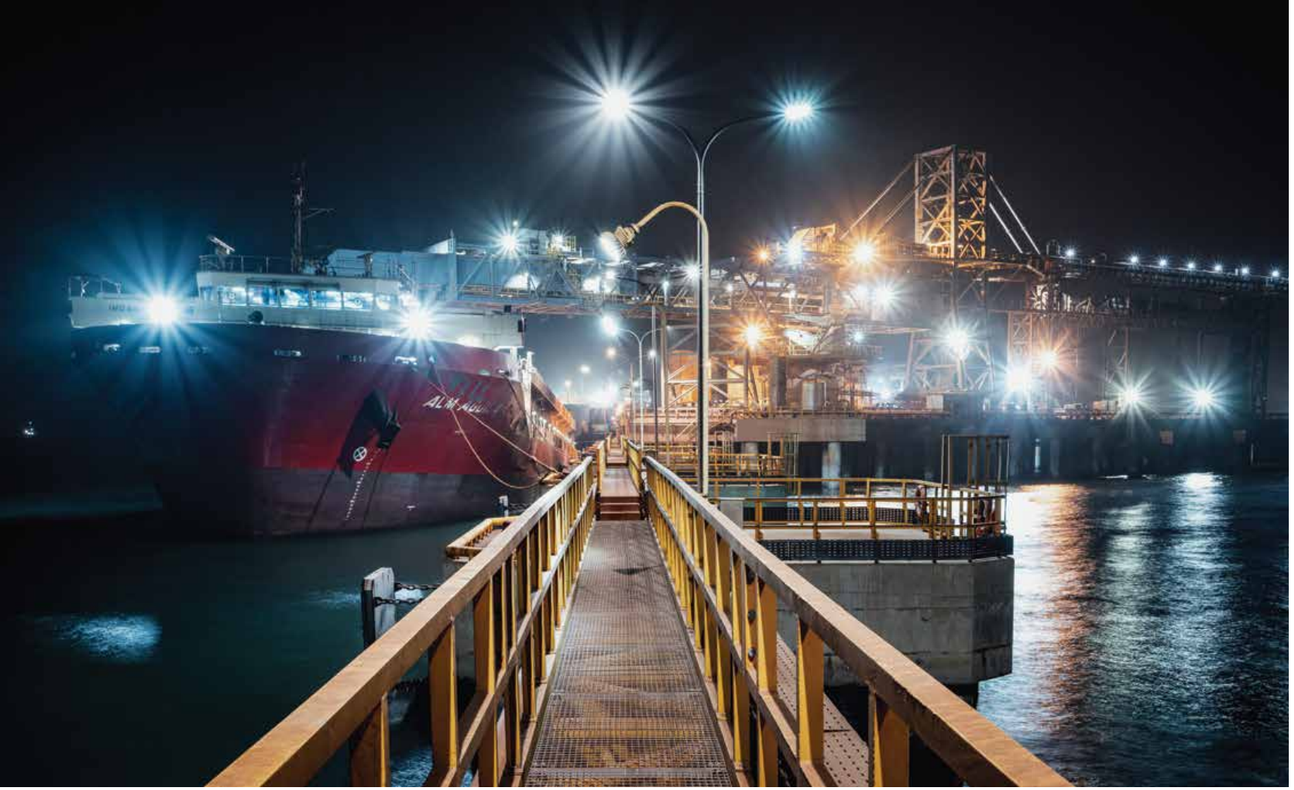
We reserve the right to audit suppliers to ensure compliance with EGA's Responsible Sourcing Standards.

In 2021, we initiated a project to further improve our Responsible Sourcing Programme with the intention of gaining greater oversight of environmental and social performance among our supply chain partners. This project includes developing enhanced vendor risk profiles incorporating bespoke ESG questionnaires and aligning our approach with internationally recognised standards such as the OECD[110] Due Diligence Guidance for Responsible Supply Chains and Version 3 of the Aluminium Stewardship Initiative's Performance Standards.

From 2022 onwards, we will be using enhanced risk profiles to better inform the requirement for enhanced due diligence for environmental and social topics within our supply chain.

Long-term, we will be establishing clear preferences for suppliers certified against recognised third-party sustainability standards, such as ASI.

[112] Or provided comparable assurances.
[113] The Organization for Economic Cooperation and Development



The UAE National In-Country Value Program

On the 22 of November 2021, EGA signed up to the National In-Country Value Program, a UAE government programme that aims to boost economic performance and support local industries by redirecting higher portions of public spending into the national economy.

The programme promotes local companies and introduces their products to the market, localising value chains and strengthening industrial self-sufficiency for the UAE.

Over the past three years, this programme has achieved extraordinary results, re-injecting AED 88 billion into the local economy, creating 2,000 jobs for national talent and enrolling 5,000 suppliers.

Throughout 2022, we will be reviewing our procurement procedures to reflect the ICV model, further boosting our support of the local value chain.

Local procurement

EGA recognises that procuring goods and services locally increases the economic benefit of our activities for the countries in which we operate. Wherever we can, we maximise our utilisation of the local supply chain.

In the UAE, we spent over AED 6.6 billion (USD 1.79 billion) in 2021, on goods and services procured locally. Total overseas spending did increase by 11 per cent compared with 2020, this was primarily due to an increase in the cost of raw materials sourced from overseas coupled with an increased cost of international logistics.

In Guinea, the mining industry has historically relied on imported goods and services in the absence of competitive local suppliers. We believe that the development of a local supply chain is of vital importance for Guinea to realise the full economic benefits of its natural resources, and for the long-term success of mining businesses.

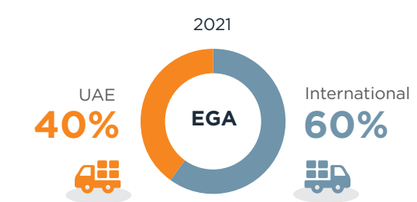
USD 112 million
spent on local suppliers in Guinea

We prioritise the local sourcing of goods and services, choosing suppliers in Guinea before looking elsewhere in Africa and then outside the continent. To assist and encourage local businesses in Guinea to tender for contracts, we have developed a specialist training programme[114] providing details related to our tender process, to help suppliers meet the quality and integrity of standards we require.

In 2021, we spent USD 112 million with local suppliers in Guinea, a 46 per cent increase from 2020.

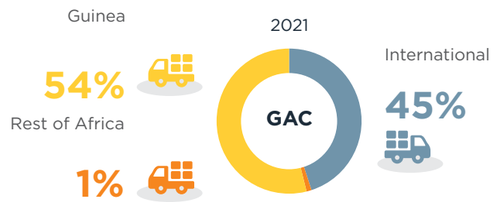
[114] In partnership with a third-party agency to assist with training local suppliers based in Guinea.

Figure 36: Percentage of the procurement budget spent in UAE



	2018	2019	2020
UAE	38%	38%	45%
International	62%	62%	55%

Figure 37: Percentage of the procurement budget spent in Guinea



	2018	2019	2020
Guinea	12%	19%	37%
Rest of Africa	1%	0%	2%
International	87%	81%	60%

Ciimate change transition

Understanding the physical risks of a changing climate

Regardless of actions taken to reduce emissions today, change is already locked into global climate systems.

A changing climate will impose a series of challenges for the metals and mining industry, especially given that the sector relies on substantial fixed assets and infrastructure with long lifespans that are dependent on global supply chains.

It is imperative that EGA fully understand the risks associated with a changing climate to be able to best plan in advance and adapt accordingly.

In 2021, we conducted a climate change study to identify any current and potential future climate risks for our operations in the UAE and Guinea as well as any potential knock-on effects for nearby communities or local environment. Our study gleaned information from a diverse range of sources.[115] and considered several future representative concentration pathways. The study considered climatic factors including, both chronic and acute changes in temperature, precipitation, water stress, sea level, storm surge and vector-borne disease, among others.[116]

The outcome of our study confirmed that changes in temperature and precipitation attributable to climate change are likely to have already taken place, but no immediate substantial consequences are likely for our operations. However, longer term, both chronic and acute changes can be anticipated that are likely to require adaptation.

To achieve a greater degree of confidence in the type and severity of longer-term change, and therefore a greater understanding of the extent and scale of adaptation investment required, we will be conducting a further, more detailed study in 2022.

[115] From academic and government sources
[116] Assumptions made during climate modelling regarding the future concentration of greenhouse gases in the atmosphere, as these are dependent on global emissions reduction efforts

Climate change transitional risks

The essential role that aluminium has to play for a decarbonised economy has been well documented for decades. However, whereas drivers and expectations among the aluminium industry for lower carbon products is not a new phenomenon, the level of importance to stakeholders is growing rapidly.

This importance has been reflected during the collaboration between upstream, downstream, end users and civil society during the development of the ASI Performance Standards. The standards requiring that certified entities both establish time-bound targets for emission reductions as well as make product life cycle assessment data available.

Also, the close relationships we have formed with our customers over the decades have provided invaluable to understanding the growing level of importance attributed to lower carbon products and our customers' need to understanding precisely how the embedded[117] carbon of our aluminium is calculated.

We also anticipate that certain markets will introduce a price linked to the embedded carbon of certain imports, including aluminium. In 2021, we examined several scenarios associated with the potential introduction of a carbon levy for aluminium products sold into certain markets.

At EGA, our commitment to net zero emissions and the global demand for low carbon products are core considerations for our executive leadership team. We have already built a roadmap to achieve net zero emissions by 2050 with the support of both internal and external engineers, technologists and economists to ensure that what we are planning for the short, medium and long-term can be technically and commercially viable[118]. Our new low carbon brand CelestiAL, the world's first aluminium derived from solar power, evidences what we are able to achieve in the short-term.

[117] The emissions attributed with input materials, transportation, production processes etc. associated with a product.
[118] Please refer to section 1 'Introduction to EGA'

Climate change and Enterprise Risk Management

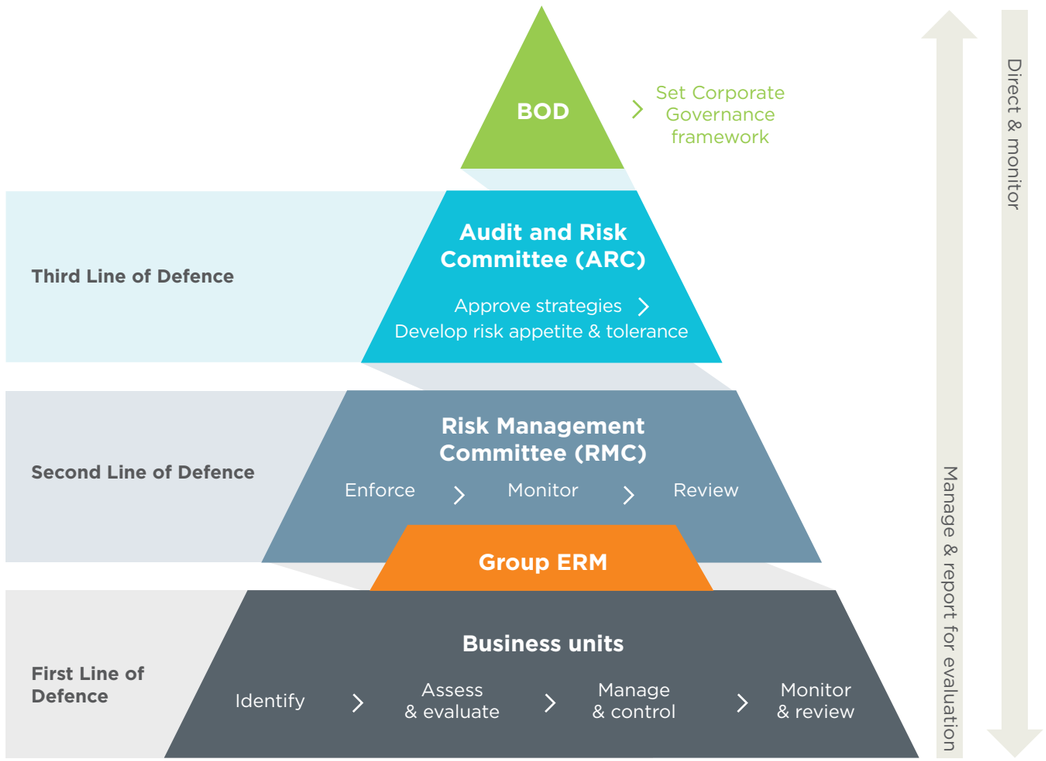
As EGA studies, understands and responds to the challenges associated with climate change, the associated risks, opportunities, likelihoods, severity, necessary controls and cost implications are all managed at an enterprise level.

Our overall climate change risk consists of four components: regulatory risks, commercial risks, physical risks and societal risks. The management of these risks is defined in our EGA group-wide Enterprise Risk Management framework (ERM). This framework establishes management activities, associated objectives, procedures to manage risk as well as roles and responsibilities for both individuals and EGA committees to support the risk management process.

All risks identified within our ERM framework, including those related to climate change, are assigned to relevant risk owners within our organisation. Risk identification is captured, assessed and managed in collaboration with relevant stakeholders.

Our governance framework requires that all risks, including those associated with climate change, are reviewed, re-assessed and updated on an annual basis.

The three lines of defence of EGA's risk management framework



Meeting international quality standards and customer satisfaction

Meeting international quality standards

All of EGA's UAE facilities are certified to ISO 9001:2015 and IATF 16949:2016 standards.

ISO 9001:2015 is the international standard for quality management systems. In order to achieve certification, an organisation must demonstrate an ability to systematically provide products and services that meet customer and regulatory requirements and demonstrate continuous improvement.

The IATF standard details best practice when designing, developing, manufacturing, installing and servicing automotive products. Certification is a requirement for supplying value-added products to companies operating in the automotive supply chain. The standard was developed by the International Automotive Task Force, a group of trade associations and leading companies including BMW Group, General Motors, Ford and Volkswagen.

At EGA, we operate our own laboratories to test and confirm that our products meet the expectations of our customers. All EGA laboratories are also certified to ISO/IEC 17025:2017, the benchmark standard for testing laboratories. Certification demonstrates to customers, regulators and other stakeholders that we are technically proficient and able to produce precise and accurate test data. As part of the certification process, our laboratory quality management system is thoroughly evaluated on a regular basis. The 2020 ISO/IEC audit was conducted virtually and affirmed our continued technical competence and compliance.

We comply with the European Union's Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) and Restriction of Hazardous Substances (ROHS) standards. In addition, EGA provides customers with material safety data, which details the specific chemical composition associated with each EGA product.

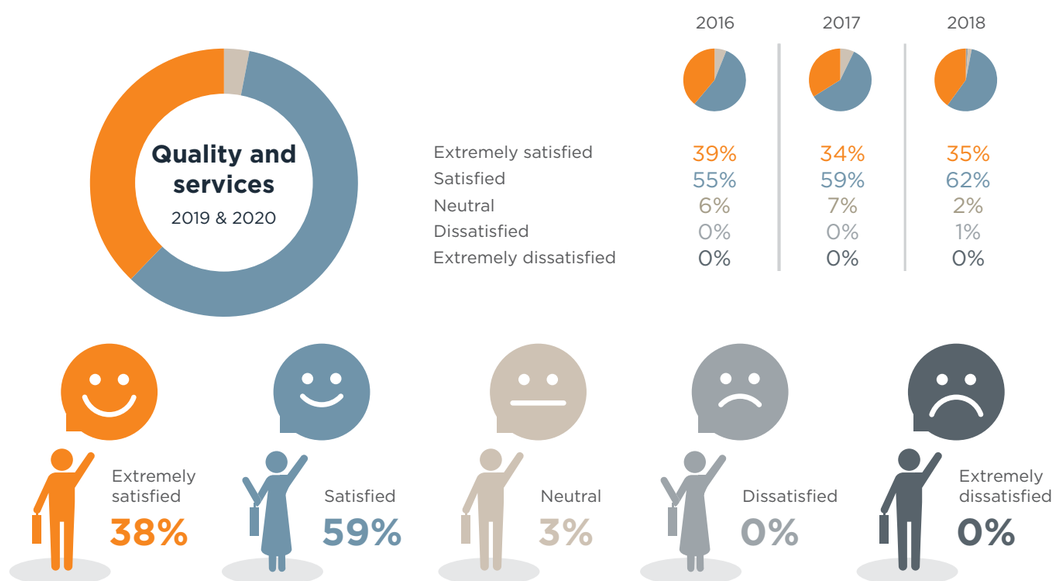
Customer satisfaction and feedback

Each year, EGA conducts a customer satisfaction survey which is an important feedback tool, enabling us to identify potential ways to further improve our products and associated services for our customers. Our quality department manages the survey, independent from EGA's marketing department, to ensure impartiality, confidentiality and effectiveness of the process.

EGA's latest survey results included responses from 263 customers based in Asia, Europe, the Middle East, North Africa, the Indian sub-continent and the Americas.

The survey identified that 98 per cent of respondents were either satisfied or extremely satisfied with the quality of EGA's products.

Figure 38: Customer quality and services satisfaction[119]



Note: Originally due for completion in early 2020, EGA's 2019 Customer Survey was postponed given the global focus on managing the COVID-19 pandemic at the time. Subsequently, the 2019 survey was combined with results from the 2020 survey. The results of the 2021 survey will be published in our 2022 sustainability report.

[119] In 2021, we did not identify any non-compliance with regulations and/or/voluntary codes concerning marketing communications.

Centre of Excellence

EGA's Technology Excellence Team is part of our Technology Development & Transfer Department. They conduct extensive research into practical challenges across EGA operations, facilitating employee-driven solutions that optimise internal processes, minimise environmental impact and reduce costs. The team is also responsible for the management of EGA's intellectual property. Over the years, we have filed 35 patents related to aluminium smelting enhancements with three new patents filed in 2021.

Through our Technology Excellence Team, all EGA employees enjoy full access to EGA's Knowledge Hub, an online library offering free, unlimited access to a wide range of books, magazines, technical articles and journal papers. Since 1985, we have prepared and submitted more than 181 research papers to international committees and conferences specific to the aluminium industry. In 2021, we published a total of 14 papers associated with advancements in the aluminium industry. We also presented six technical papers at the Minerals, Metals and Materials Society annual conference[120].

Collaborations

Our Technology Excellence Team conducts research in collaboration with established academic institutions in the UAE and internationally. Over the years, we have developed partnerships with the American University of Sharjah, Abu Dhabi University, Heriot-Watt University, Khalifa University, Massachusetts Institute of Technology (MIT) and the University of New South Wales.

Every year, we collaborate with UAE undergraduate students on new research topics, including knowledge exchange sessions, project sponsorship and competitions. In 2021, EGA shared four research topics with students for use as graduation projects, introducing students to real industrial problems, stimulating critical thinking, and leading the students to problem solve engineering solutions for EGA.

Historically, EGA has partnered with MIT on research projects relevant to the aluminium value chain, and hosted masters and PHD students who worked closely with EGA on projects focussed on improving efficiencies and quality. Unfortunately, given complications associated with the COVID-19 pandemic, such research projects were put on hold in 2021, but we hope to resume in 2022.

[120] An important platform for aluminium industry professionals to network and learn about advancements.

AI robot competition

In 2021, we held the fourth annual AI Robot Competition. First established in 2017, this competition is designed to increase support for young people in developing real-world skills in Industry 4.0 technologies and raise awareness of and interest in both EGA and the broader aluminium industry among UAE based university students.

Each year, we encourage students to think creatively as they develop new tools, techniques and solutions for use in an aluminium smelter. The 2021 challenge was to develop a robotic machine capable of cleaning silt and mud from the EGA's aeration basin[121] in Al Taweelah. We invited three teams of students from UAE University and two teams of students from Abu Dhabi University. The team from UAE University won the competition.

The team's prototype not only improves the aeration of seawater prior to release to the marine environment but it can also run entirely on solar power. The device will be further developed for long-term use within EGA's operations.

[121] This basin aerates used seawater before returning it to the marine environment.

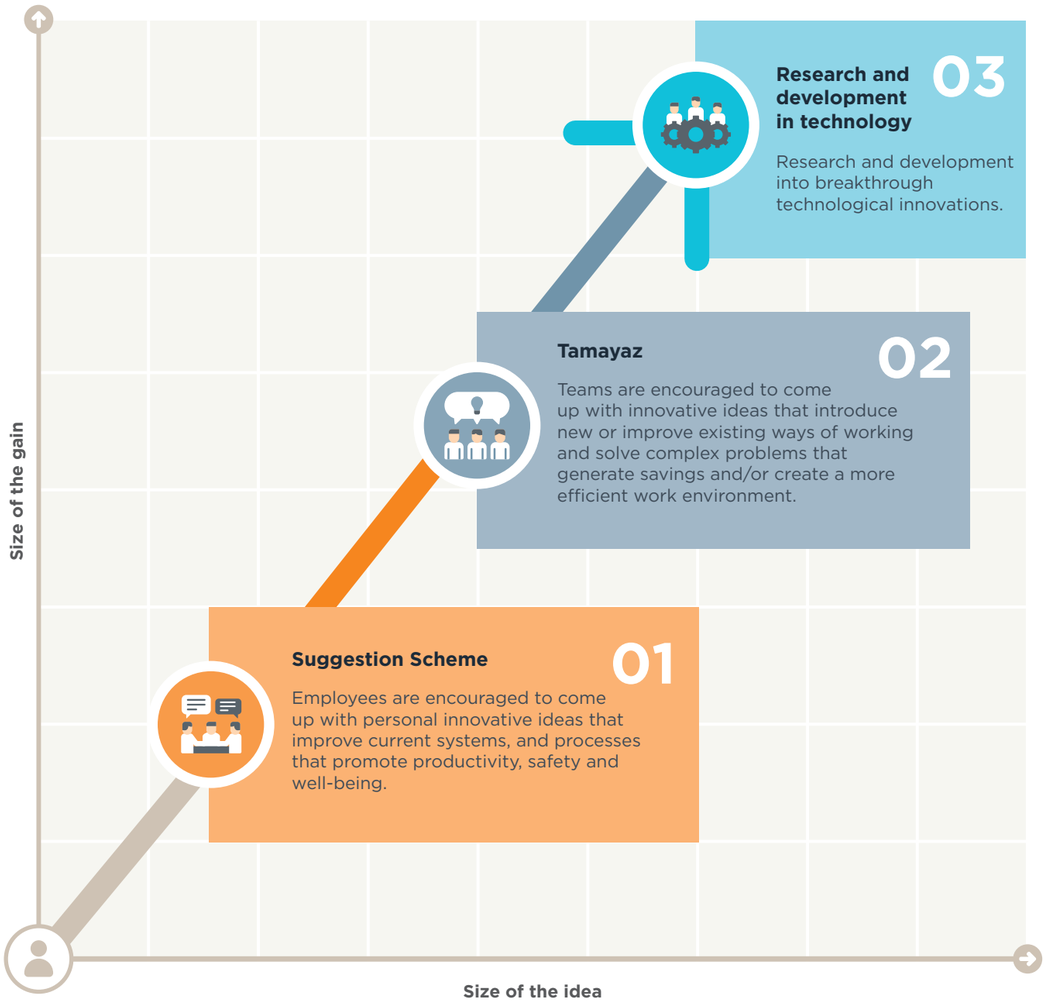
Continuous improvement

For decades, EGA has focused on continuous improvement as a foundation for developing and maintaining global competitiveness.

We believe that the people closest to a work process are often in an ideal position to identify what improvements are required and to create the best solution. We have therefore put in place a system to encourage and reward innovative thinking at all levels of our organisation. As part of this system, EGA operates two continuous improvement programmes, the Suggestion Scheme and Tamayaz Programme.

In addition, EGA also has a dedicated team of in-house Lean Six Sigma specialists who support various business functions in identifying inefficiencies and improving overall performance.

EGA innovation journey



> Innovation comes with collaboration and I must say I have a brilliant team who never fails to amaze me with their innovative ideas. I have had a long journey in EGA's Suggestion Scheme and I personally can relate to the excitement it brings when you see how your suggestions helps to resolve issues. Its true what they say, without creativity, there would be no progress.

Nasser Al Khaja
VP Maintenance

> There is no such thing as perfect, and that is especially true in the business world. Continuous improvement is the key to success, and the use of lean tools has proven that in EGA.

Hala Alhashmi
Senior Engineer - Quality & Lean

EGA's Suggestion Scheme

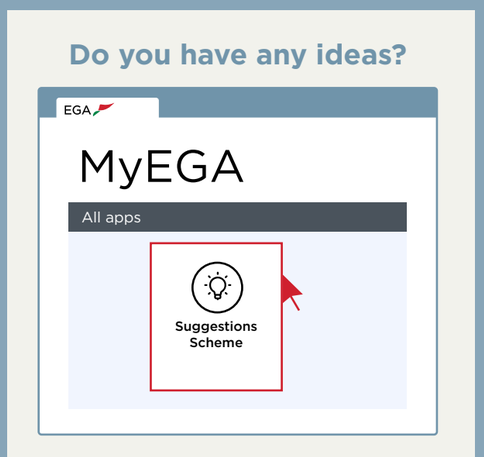
EGA's Suggestion Scheme is integral to our company's culture of innovation and continuous improvement. Since its foundation in 1981, more than 9,800 EGA employees have since collectively submitted over 546,000 suggestions associated with every facet of the business. Designed as a reward-and recognition programme, our suggestion scheme encourages and empowers employees to bring forward their ideas for both incremental and large-scale improvements.

In 2021, we received 32,574 suggestions, of which 25,146 were implemented, saving the organisation more than AED 32.5 million (USD 8.8 million).

ESG in the Suggestion Scheme

In 2021, we made some improvements to our Suggestion Scheme adding several additional environmental, social and governance-related selection options for people to choose from. The intent being to encourage everyone at EGA to consider and propose ideas as to how we could realise associated improvements at EGA.

Currently, we are conducting a series of educational webinars covering, climate change, biodiversity, diversity and inclusion, labour and human rights, community impacts, waste management, air quality, and water resources among others. During each of these webinars, we reminded and encouraged employees to share any opportunities for associated improvements through EGA's Suggestion Scheme.



> I strongly believe that 'problems always come with solutions'. The EGA Suggestion Scheme provides us with a wonderful platform to think, analyse and explore how my ideas, and the ideas from my colleagues, can work together in overcoming problematic situations.

Ritesh Vitthalji Varu
Senior Technician – Electrical Maintenance

> I use the EGA Suggestion Scheme as a platform to demonstrate my team 'Let's Do It' approach. I am thankful to the EGA Management for providing us with this amazing platform to showcase employee innovation and team work.

Venkatraman Krishnamoorthy Somasundaram
Senior Supervisor - Maintenance

In 2021, approximately, 83 per cent of EGA employees in the UAE participated in EGA's Suggestion Scheme. These employees have helped improve every facet of our business, with their suggestions generating cost-savings, as well as strengthening our health, safety and environmental performance.

Employees whose suggestions are selected for implementation are rewarded and the best suggestions are recognised in company-wide communications and annual events.

In 2021, we received a 54 per cent increase in participation in compared with 2020, with many proposed suggestions being attributable to potential improvements in health, safety and environmental aspects as well as improvements we can make to improve the quality of life for those living in our residential facilities.

Figure 39: Suggestion submitted and implemented

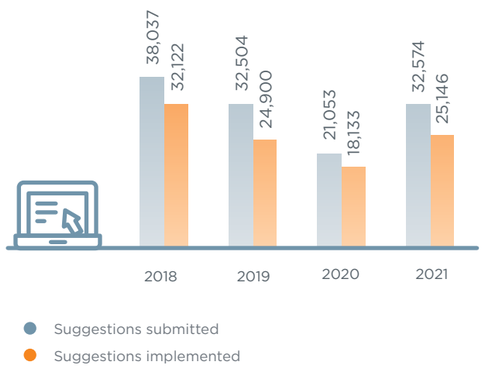
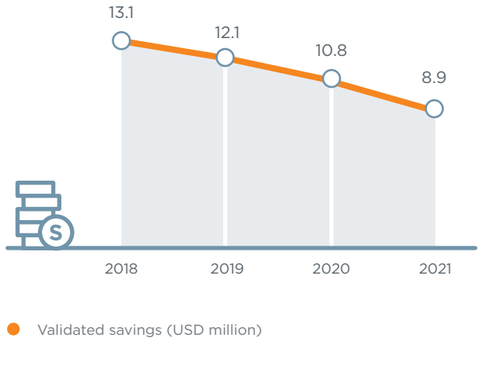


Figure 40: Validated savings



Tamayaz Programme

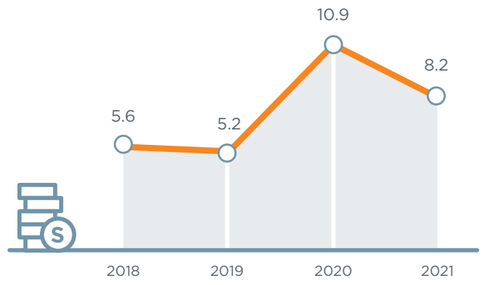
Tamayaz, meaning "to differentiate or distinguish oneself" in Arabic, is the name of an employee reward-and-recognition programme which we launched in 2016 to encourage mid-level managers and their teams to find potential solutions to overlooked problems through structured, scientific analysis. Tamayaz teams are coached by our in-house lean manufacturing specialists.

In 2021, the programme recorded a total of 280 proposed projects, of which 144 were implemented, generating savings of AED 28.9 million (USD 8.2 million).

2021 Tamayaz Programme figures

SUBMITTED PROJECTS	280
IMPLEMENTED	144
AUDITED FINANCIAL SAVINGS (USD million)	8.2

Figure 41: Tamayaz projects' audited financial savings



> The Tamayaz Programme and Suggestion Scheme have taken roots in EGA and become a back bone of people involvement for continuous improvement in all aspects of the business. I feel proud of being part of this programme and as part of EGA.

Vineetha Karikkan
Supervisor - Suggestion Scheme

> Working as a team can help you achieve things you never could alone. By pooling our resources and skills, and supporting each other through Tamayaz Programme, we can create a more sustainable system that benefits everyone.

Fatima Mohamed
Senior Engineer - Quality & Lean

05

Appendices

Limited assurance on specified parts of the Sustainability Report

Independent Limited Assurance report to Emirates Global Aluminium

We have been engaged by the Board of Directions of Emirates Global Aluminium ("EGA") to provide limited assurance in respect of the Assured Sustainability Parameters as identified below for the year ended 31 December 2021. The Assured Sustainability Parameters and explanatory notes are included in EGA's Sustainability Report for the year ended 31 December 2021 (the "Sustainability Report").

The Limited Assurance Sustainability Parameters covered by our limited assurance engagement are:

Selected performance area	Associated pages where information on selected performance area is disclosed	Associated pages where information on reporting criteria of selected performance area is disclosed
2021 GHG Emissions (Total Scope 1 and 2)	54, 55, 56	54, 55, 56
2021 Safety Statistics - Injury Rate, Fatalities, and Occupational Disease Rate	81, 83, 85, 87	81, 83, 85, 87
2021 NOx, SOx and Fluoride Emissions	46, 47, 48	46, 47, 48

Our conclusion:
Our conclusion has been formed on the basis of, and is subject to, the matters outlined in this report.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Based on the procedures performed and the evidence obtained, as described below, nothing has come to our attention that causes us to believe that the Limited Assurance Sustainability Parameters, as defined above, for the year ended 31 December 2021, have not in all material respects, been prepared in accordance with the Global Reporting Initiative (GRI) 2016 standards Core and explanatory notes of the Sustainability Report.

Management's responsibility

Management are responsible for the preparation of the Limited Assurance Sustainability Parameters in accordance with the Global Reporting Initiative (GRI) 2016 standards Core and explanatory notes of the Sustainability Report.

These responsibilities include establishing such internal controls as management determines are necessary to enable the preparation of the Limited Assurance Sustainability Parameters that are free from material misstatement whether due to fraud or error and selecting Global Reporting Initiative (GRI) 2016 standards Core and explanatory notes as the criteria against which to measure/ evaluate the Sustainability Parameters.

Management is responsible for preventing and detecting fraud and for identifying and ensuring that EGA complies with laws and regulations applicable to its activities.

Management is also responsible for ensuring that staff involved with the preparation of the description and Sustainability Report are properly trained, information systems are properly updated and that any changes in reporting encompass all significant business units.

Our responsibility

Our responsibility is to express a limited assurance conclusion on the preparation of the Limited Assurance Sustainability Parameters included in the Sustainability Report, as defined above.

We conducted our assurance engagement in accordance with International Standard on Assurance Engagements ISAE 3000 (Revised), *Assurance Engagements other than Audits or Reviews of Historical Financial Information* and International Standard on Assurance Engagements (ISAE) 3410, *Assurance Engagements on Greenhouse Gas Statements (ISAE 3410),* issued by the International Auditing and Assurance Standards Board.

The firm applies International Standard on Quality Control 1 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 International Ethics Standards Board for Accountants' *International Code of Ethics for Professional Accountants, (including International Independence Standards)* (IESBA Code), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

ISAE 3000 (Revised) and ISAE 3410 requires that we plan and perform the engagement to obtain limited assurance about whether the Limited Assurance Sustainability Parameters are free from material misstatement.

A limited assurance engagement in accordance with IASE 3000 (Revised) and ISAE 3410 involves assessing the risks of material misstatement of the Limited Assurance Sustainability Parameters, whether due to fraud or error, responding to the assessed risks as necessary in the circumstances of the engagement. The nature, timing and extent of procedures selected depend on our understanding of the Limited Assurance Sustainability Parameters and other engagement circumstances, and our consideration of areas where material misstatements of the Limited Assurance Sustainability Parameters are likely to arise.

In developing our understanding of the Limited Assurance Sustainability Parameters and other engagement circumstances, we have considered the process used to prepare the Limited Assurance Sustainability Parameters in order to design assurance procedures that are appropriate in the circumstances, but not for the purposes of expressing a conclusion as to the effectiveness of EGA's internal control over the preparation of the Limited Assurance Sustainability Parameters.

Our engagement also included: assessing the appropriateness of the Limited Assurance Sustainability Parameters, the suitability of the criteria used by EGA in preparing the Limited Assurance Sustainability Parameters in the circumstances of the engagement, evaluating the appropriateness of the quantification methods, reporting policies and procedures, and models used in the preparation of the Limited Assurance Sustainability Parameters and the reasonableness of estimates made by EGA.

Procedures performed

Our limited assurance engagement on the Limited Assurance Sustainability Parameters consisted of making enquiries, primarily of persons responsible for the preparation of the Limited Assurance Sustainability Parameters, and applying analytical and other procedures, as appropriate. These procedures were based on our professional judgement and included:

- interviews with senior management and relevant staff at corporate and selected site level concerning sustainability strategy and policies for material issues, and the implementation of these across the business;
- enquiries of management to gain an understanding of EGA's processes for determining material issues for EGA's key stakeholder groups;
- enquiries of relevant staff at corporate and selected site level responsible for the preparation of the Limited Assurance Sustainability Parameters;
- enquiries about the design and implementation of the systems and methods used to collect and report the Limited Assurance Sustainability Parameters, including the aggregation of the reported information;
- comparing the Limited Assurance Sustainability Parameters to relevant underlying sources on a sample basis to determine whether all the relevant information has been appropriately included in the Sustainability Report;
- reading the Limited Assurance Sustainability Parameters presented in the Sustainability Report to determine whether they are in line with our overall knowledge of, and experience with, the sustainability performance of EGA;
- reading the remainder of the Sustainability Report to determine whether there are any material misstatements of fact or material inconsistencies based on our understanding obtained as part of our assurance engagement.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement, and consequently the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. Accordingly, we do not express a reasonable assurance conclusion on the Limited Assurance Sustainability Parameters.

Purpose of our report

In accordance with the terms of our engagement, this assurance report has been prepared for EGA for the purpose of assisting Board of Directors in determining whether EGA's Limited Assurance Sustainability Parameters are prepared in accordance with Global Reporting Initiative (GRI) 2016 standards Core, and explanatory notes of the Sustainability Report and for no other purpose or in any other context.

Inherent limitations

Due to the inherent limitations of any internal control structure, it is possible that errors or irregularities in the information presented in the Sustainability Report may occur and not be detected. Our engagement is not designed to detect all weaknesses in the internal controls over the preparation of the Report, as the engagement has not been performed continuously throughout the period and the procedures performed were undertaken on a test basis.

KPMG

KPMG Lower Gulf Limited

Dubai, United Arab Emirates

Date: 4 November 2022

GRI content index

The GRI content index is a navigation tool that specifies which GRI standards are used, which disclosures have been made and where these disclosures can be found in the report.

GRI standard #		Disclosure	Page number	Reason for omission
General disclosures				
GRI 102: General disclosures 2016		**Organization profile**		
	102-1	Name of the organisation	6	
	102-2	Activities, brands, products, and services	14-15, 22-23, 51	
	102-3	Location of headquarters	15	
	102-4	Location of operations	14-15	
	102-5	Ownership and legal form	14	
	102-6	Markets served	20-23	
	102-7	Scale of the organisation	14-15, 21, 36, 104	
	102-8	Information on employees and other workers	83, 99-100, 106, 108	
	102-9	Supply chain	119-121	
	102-10	Significant changes to the organisation and its supply chain	32	
	102-11	Precautionary principle or approach	26-27, 44, 76	
	102-12	External initiatives	28	
	102-13	Membership of associations	24	
		Strategy		
	102-14	Statement from senior decision-maker	9, 11	
		Ethics and integrity		
	102-16	Values, principles, standards and norms of behaviour	24-25	
		Governance		
	102-18	Governance structure	114-115	
		Stakeholder engagement		
	102-40	List of stakeholder groups	39	
	102-41	Collective bargaining agreements	97	
	102-42	Identifying and selecting stakeholders	39	
	102-43	Approach to stakeholder engagement	38-39, 89, 94, 97-98, 127	
	102-44	Key topics and concerns raised	38-41, 89, 94, 97-98, 127	
		Reporting practice		
	102-45	Entities included in the consolidated financial statements	14-15	
	102-46	Defining report content and topic boundaries	38-41	
	102-47	List of material topics	40	
	102-48	Restatements of information	36	
	102-49	Changes in reporting	40	
	102-50	Reporting period	6	
	102-51	Date of most recent report	6	
	102-52	Reporting cycle	6	
	102-53	Contact point for questions regarding the report	6	
	102-54	Claims of reporting in accordance with the GRI Standards	6	
	102-55	GRI content index	138-142	
	102-56	External assurance	136-137	
Most material topics				
Health, safety and well-being				
GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundary	76-80, 82, 84-87	
	103-2	The management approach and its components	28, 76-80, 82, 84-87	
	103-3	Evaluation of the management approach	28, 76-80, 82, 84-87	
GRI 403: Occupational health and safety 2018	403-1	Occupational health and safety management system	76-77	
	403-2	Hazard identification, risk assessment, and incident investigation	76-77	
	403-3	Occupational health services	84-87	
	403-4	Worker participation, consultation, and communication on occupational health and safety	77, 98, 131-32	
	403-5	Worker training on occupational health and safety	77-78	
	403-6	Promotion of worker health	84-87	
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	119	
	403-8	Workers covered by an occupational health and safety management system	77, 104	
	403-9	Work-related injuries	80-83	
	403-10	Work-related ill health	80, 85, 87	
Business integrity and ethics				
GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundary	116-118	
	103-2	The management approach and its components	28, 116-118	
	103-3	Evaluation of the management approach	28, 116-118	
GRI 205: Anti-corruption 2016	205-1	Operations assessed for risks related to corruption	116	
	205-2	Communication and training about anti-corruption policies and procedures	116-117	
	205-3	Confirmed incidents of corruption and actions taken	118	
GRI 206: Anti-competitive behaviour 2016	206-1	Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices	118	

GRI standard #		Disclosure	Page number	Reason for omission
Air quality				
GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundary	46-49	
	103-2	The management approach and its components	28, 44-49	
	103-3	Evaluation of the management approach	28, 44-49	
GRI 305: Emissions 2016	305-1	Direct (scope 1) GHG emissions	54, 56	
	305-2	Energy indirect (scope 2) GHG emissions	55-56	
	305-4	GHG emissions intensity	55-56	
	305-7	Nitrogen oxides (NO_x), sulfur oxides (SO_x), and other significant air emissions	46-49	
Respecting human rights				
GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundary	88-95, 97, 116, 119	
	103-2	The management approach and its components	28, 88-98, 116-119, 131-132	
	103-3	Evaluation of the management approach	28, 88-98, 116-119, 131-132	
GRI 406: Non-discrimination 2016	406-1	Incidents of discrimination and corrective actions taken	118	
GRI 407: Freedom of association and collective bargaining 2016	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	97	
GRI 408: Child labour 2016	408-1	Operations and suppliers at significant risk for incidents of child labour	28, 119	
GRI 409: Forced or compulsory labour 2016	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labour	28, 119	
GRI 410: Security practices 2016	410-1	Security personnel trained in human rights policies or procedures	93	We have reported where risk is considered material, hence considered not applicable for UAE operations.
GRI 412: Human rights assessment 2016	412-1	Operations that have been subject to human rights reviews or impact assessments	89	
Openness and transparency				
GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundary	6	
	103-2	The management approach and its components	6,26-28	
	103-3	Evaluation of the management approach	6,26-28	
GRI 307: Environmental compliance	307-1	Non-compliance with environmental laws and regulations	73	
GRI 415: Public policy 2016	415-1	Political contributions	116	
GRI 416: Customer health and safety 2016	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	118	
GRI 417: Marketing and labelling 2016	417-2	Incidents of non-compliance concerning product and service information and labelling	118	
	417-3	Incidents of non-compliance concerning marketing communications	127	
GRI 419: Socioeconomic compliance 2016	419-1	Non-compliance with laws and regulations in the social and economic area	118	
Community engagement				
GRI 103: Management approach 2016	103-1	Explanation of the material topic and its boundary	88-96	
	103-2	The management approach and its components	28,88-96	
	103-3	Evaluation of the management approach	28,88-96	
GRI 411: Rights of indigenous peoples 2016	411-1	Incidents of violations involving rights of indigenous peoples	89,94	
	413-1	Operations with local community engagement, impact assessments, and development programmes	88	
	413-2	Operations with significant actual and potential negative impacts on local communities	88-89	

ASI content index

The ASI content index is a navigation tool that specifies which Aluminium Stewardship Initiative Performance Standards disclosure requirements have been made and where these disclosures can be found in the report.

ASI standard	ASI ref #	Disclosure requirement	Page number
Sustainability reporting	3.1	Governance approach and material, environmental, social and economic impacts	38-41, 138-141
Non-compliance and liabilities	3.2	Information on significant fines, judgments, penalties and non-monetary sanctions for failure to comply with applicable law	118
Payments to governments	3.3 b	Payments to governments, building on existing audit and assurance systems	36
Disclosure of GHG emissions and energy use	5.1	Material GHG emissions and energy use by source	52-57
GHG emissions reductions	5.2	Time-bound GHG emissions reduction targets	57
Emissions to air	6.1	Emissions to air	46-49
Discharges to water	6.2	Discharges to water	58-61
Reporting of spills	6.4 b	Impact assessments of any significant spills and remediation actions taken	73
Waste management and reporting	6.5 b	Quantity of hazardous and non-hazardous waste generated and associated waste disposal methods	62, 68
Disclosure of water usage and risks	7.3	Water withdrawal and use. Material water related risks	58-61
Biodiversity management	8.2 c	Biodiversity action plan outcomes	70-73

TCFD content index

The TCFD content index is a navigation tool that specifies which Task Force on Climate-related Financial Disclosure recommendations have been made and where these disclosures can be found in the report.

	TCFD recommendations	Disclosure recommendations	Page number
Governance	a) Describe the Board's oversight of climate-related risks and opportunities	Good Governance: Our corporate governance	114-115
	b) Describe management's role in assessing and managing climate-related risks and opportunities.	Good Governance: Our corporate governance	114-115
Strategy	a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.	Good Governance: Climate change Transition	122-123
	b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.	Introduction: Our Sustainability Approach Good Governance: Climate change Transition	26-27, 122-123
	c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	Good Governance: Climate change Transition	122-123
Risk Management	a) Describe the organisation's processes for identifying and assessing climate-related risks.	Good Governance: Our corporate governance Good Governance: Climate change Transition	114-115, 112-123
	b) Describe the organisation's processes for managing climate-related risks.	Good Governance: Our corporate governance Good Governance: Climate change Transition	114-115, 112-123
	c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.	Good Governance: Climate change Transition	112-123
Metrics and Targets	a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.	Introduction: Our Sustainability Approach Good Governance: Climate change Transition	26-27, 122-123
	b) Disclose scope 1, scope 2, and, if appropriate, scope 3 greenhouse gas (GHG) emissions, and the related risks.	Safeguarding the environment: Greenhouse gas emissions	54-56
	c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.	Introduction: Our Sustainability Approach	26-27

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