SDG Zinc Sector Roadmap

2021 Status Update
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1. Executive Summary

The United Nations Sustainable Development Goals (SDGs) are a widely used framework of action to address the world’s greatest environment, social, and economic challenges by 2030. In 2020, the International Zinc Association (IZA) launched the SDG Roadmap for the Global Zinc Sector. The purpose of this Roadmap was to convene representatives from across the zinc industry and identify the areas with the greatest potential for maximising the sector’s contribution to the SDGs. IZA committed itself to promoting and furthering the actions detailed in this Roadmap through work programs, identifying metrics and indicators to track sector progress, and encouraging peers to leverage this Roadmap to drive action and enhance engagement with stakeholders. One year later, in 2021 IZA reviewed its activities and achievements to understand if progress has been made contributing to the UN SDGs at zinc sector level.

As a result, baselines have been identified for each impact opportunity. Based on published information in IZA member companies’ websites and annual reports sustainability indicators were researched. While quantitative sustainability indicators would have been ideal, in some cases it was still impossible to find credible information complied in a transparent and harmonized way in publicly available space. IZA member companies do report on metrics (e.g. on GHG emissions or on women among their workforce). But not all member companies report and those that do use slightly different methodologies. Where quantitative data was unavailable, best practice examples and case studies were used.

Overall, for the four themes baselines have been identified:

1. **Health and wellbeing**: Through the initiatives Zinc Saves Kids (ZSK) and Zinc Nutrient Initiative (ZNI), IZA makes a positive difference. The number of countries and partners involved, people reached and funds that have been raised allows for quantification of impact and progress.

2. **Energy efficiency and climate resilience**: Increasingly, IZA member companies report on the use of renewable energy and on their GHG emissions (Scope 1-3). Furthermore, an increasing number of companies are joining the IZA Life Cycle Assessment (LCA) project. The IZA Climate Change Task Force (CCTF), bringing together company representatives and experts from around the world at all levels of the zinc value chain, was established in 2021 to develop a de-carbonization strategy for the whole zinc sector in 2022. Zinc plays a role in renewable energy production as well as in energy storage, making it an enabler of the energy transition. In 2020, IZA established the Zinc Battery Initiative to support and speed up developments of break-through technologies in energy storage. By protecting steel from corrosion in infrastructure, building and construction, zinc contributes to climate resilience.

3. **Operational impacts to people and the environment**: IZA member companies increasingly report on their environmental footprint and gender diversity, aiming to improve both. Examples show how company-community interaction can make a positive change to people’s living conditions. IZA supports responsible sourcing initiatives, engages in the development of the Joint Due Diligence Standard, and works towards a multi-metal ESG standard being available to all zinc smelters worldwide.

4. **Closing the loop**: Accelerate and maximize the recycling potential of zinc containing materials: With its projects on zinc stocks and flows, IZA helps to understand and quantify current recycling activities and potentials for further increasing the circularity of zinc.

Starting from these baselines, in 2022 and subsequent years, IZA and member companies will work towards further increasing the sector’s contributions to the SDGs in a targeted and focused manner. To measure progress more quantitatively, harmonized reporting of selected sustainability indicators by IZA member companies can be considered.
Introduction

The Sustainable Development Goals (SDGs) outline a plan of action to address the world’s greatest environment, social, and economic challenges by 2030. In order to achieve these 17 Goals, ambitious and concerted efforts from across public and private sectors, wider society, and individuals are imperative.

In 2020, the International Zinc Association (IZA) launched the SDG Roadmap for the Global Zinc Sector. The purpose of this Roadmap was to convene representatives from across the zinc industry to identify the greatest potentials for the sector to contribute to the SDGs.

“The SDG Roadmap aims to demonstrate how the zinc industry, particularly at the sector level, as well as through individual member company activities, can maximize contribution to the SDGs. This can be done through leveraging Impact Opportunities to support realization of the SDGs either through minimizing activities that have negative impacts, or through scaling up activities that have a positive impact.”

This Roadmap highlights ten SDG Impact Opportunities through which the zinc sector can maximize contribution to the priority SDGs. A series of corresponding tangible actions – or impact pathways – to help the zinc sector to achieve the Impact Opportunities are outlined in the Roadmap alongside an estimation as to the level of impact that can be achieved and the level of effort which is needed to do so.

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The SDG Roadmap for the zinc sector highlights ten SDG Impact Opportunities grouped in four themes through which the zinc sector can maximize contribution to the nine priority SDGs. The SDG Impact Opportunities have been grouped into four themes which align with the priority SDGs.

In 2020, IZA committed itself to promoting and furthering the actions detailed in this Roadmap through work programs, identifying metrics and indicators to track sector progress, and encouraging peers to leverage this Roadmap to drive action and enhance engagement with stakeholders. In 2021 IZA reviewed its activities and achievements to understand if progress has been made contributing to the UN SDGs at zinc sector level.
2. Health and Well-being: Eliminate zinc deficiency globally (Impact Opportunity 1)

As an essential mineral, zinc intake is crucial to a healthy diet and maintaining homeostasis. However, zinc deficiency remains a very significant health problem, particularly for children. The most prevalent global health issues stemming from zinc deficiency are bone development (stunting), suppressed immune system and Acute Diarrhoeal Disorder (ADD), and sickness due to pulmonary diseases such as pneumonia. The prevalence of ADD alone has been identified as one of the leading causes of death in children under five years of age (480,000 young children per year). While zinc deficiency in humans occurs mainly as a result of inadequate nutrition in diets, the role of zinc deficiency in arable soils also contributes to inadequate nutritional needs for populations relying on staple food crops (wheat, rice, corn, etc.).

As a result of this global health concern and to promote food security, the International Zinc Association, in cooperation with member companies and external project partners, launched two initiatives aimed at addressing both nutritional and agronomic needs – Zinc Saves Kids and Zinc Nutrient Initiative.

The launch of Zinc Saves Kids (ZSK), in partnership with UNICEF, followed the identification by the Copenhagen Consensus that zinc deficiency was a curable global issue that could be solved at a relatively low cost. Since 2010, ZSK has raised over USD 3.5 million directly and supported over USD 10 million of investment to fund programs in vulnerable communities around the world, in countries including Peru, Nepal, Mexico, Brazil, Laos and India. Programs include providing nutritional intervention through supplementation (zinc tablets) and outreach/training for health personnel, community workers, educators, as well as the broader public.

The Zinc Nutrient Initiative (ZNI) was motivated by the need for a long-term solution to address zinc deficiency and complement nutritional supplementation (ZSK). As such, the promotion and use of zinc-based fertilizers was identified as a way to address the problem of zinc deficient soils. Through ZNI, the...
global market for zinc-based fertilizers is now well established and growing. Much of this growth can be attributed to the increased penetration of new markets in China, India, and South-East Asian countries. The ZNI program, has reached over 30 million farmers in 8 countries and completed 500 crop trials. The overall impact of zinc-based fertilizers improves nutritional value of the farmed crop, yield produced, quality of the produce, and greater profits for farmers.

According to the Copenhagen Consensus, zinc and Vitamin A were identified as the most cost-effective solution to malnutrition. Zinc fertilizer increases the nutritional value of crops, resulting in increased zinc nutrition in the diet. The zinc Nutrient Initiative successfully helps increasing crop yield and quality helping to improve food security and generate an increased income for farmers.
3. Energy Efficiency and Climate Resilience

a) Increase the use of renewable energy and improve energy efficiency along the whole zinc value chain (Impact Opportunity 2)

IZA member companies (mines and smelters among full members) report on climate change related metrics to ensure transparency.

- > 85% report on scope 1 & 2 GHG emissions.
- > 50% report on various categories of scope 3 GHG emissions.
- > 80% have various GHG targets in place.

In only four years – from 2016 to 2019 – the number of IZA member companies reporting on their GHG emissions has more than doubled, while the number of companies reporting on renewable energy consumption has more than tripled.

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<tr>
<th>Company</th>
<th>Target</th>
<th>Source of information</th>
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<tr>
<td>Boliden</td>
<td>• Reduce CO2 intensity by 40% until 2030 (base year 2012).</td>
<td>2020 Sustainability Report, page no. 9 (link) &amp; Sustainability index 2020 under Environment and Sustainability Topic: Climate (link)</td>
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<tr>
<td>Glencore</td>
<td>• Short-term target: 15% reduction of Scope 1,2,3 by 2026.</td>
<td>Pathway to net zero (link)</td>
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<td>• Mid-term target: 40% reduction of total emissions footprint (scope 1,2,3) by 2035</td>
<td>2020 Sustainability Report (link)</td>
</tr>
<tr>
<td></td>
<td>• Ambition of achieving net zero total emissions by 2050 (Scope 1, 2 and 3)</td>
<td></td>
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<tr>
<td>Hecla Mining</td>
<td>• Goal of being net carbon neutral by 2050.</td>
<td>2020 Sustainability Report, page no. 20 (link)</td>
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<tr>
<td>Hindustan Zinc Limited</td>
<td>• Committed to Net Zero by 2050 in alignment with the Science based targets Initiative (SBTi)</td>
<td>Website (link)</td>
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<tr>
<td></td>
<td>• committed for 1 billion $ investment for climate change actions in next five years</td>
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<tr>
<td></td>
<td>• Practical GHG reduction measures include the use of Battery Electric Vehicle (BEV) in underground mining and the expression of Interest (EOI) for Supply of 300 MW of Renewable Energy.</td>
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<tr>
<td>Newmont</td>
<td>• Mid-term target of 30% reduction in greenhouse gas (GHG) emissions by 2030</td>
<td>Website (link)</td>
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<td></td>
<td>• Long-term goal of being carbon neutral by 2050.</td>
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<tr>
<td>Nyrstar</td>
<td>• 30% GHG emission reduction in operational emissions by the end of FY2023.</td>
<td>annual Responsibility Report</td>
</tr>
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<td></td>
<td>• Set a Scope 3 emissions reduction target by FY2023.</td>
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<tr>
<td></td>
<td>• Install two gigawatts of renewable power generation capacity by the end of FY2025.</td>
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<tr>
<td>South32</td>
<td>• Medium-term target: halve operational carbon emissions by 2035</td>
<td>2021 Sustainable Development Report, page no. 3 (link)</td>
</tr>
<tr>
<td></td>
<td>• Long-term goal of reaching net zero by 2050.</td>
<td></td>
</tr>
<tr>
<td>Sumitomo Metal Mining Co., Ltd.</td>
<td>• Committed as a member of the International Council on Mining and Metals (ICMM) to a goal of net zero Scope 1 and 2 greenhouse gas emissions by 2050 or sooner in line with the ambitions of the Paris Agreement.</td>
<td>Website: <a href="https://www.icmm.com/netzero">https://www.icmm.com/netzero</a></td>
</tr>
<tr>
<td>Teck Resources</td>
<td>• Announced the goal of carbon neutrality across all operations and activities by 2050 in February 2020.</td>
<td>News Release, 3 Feb 2020 (link) Climate Change Policy (link)</td>
</tr>
<tr>
<td>Trevalli Mining</td>
<td>• Short-term emission reduction target: reduce GHG intensity by 25% by 2025</td>
<td>2020 Sustainability Report, page no. 65 (link)</td>
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<td></td>
<td>• Long-term goal: being carbon neutral by 2050.</td>
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Examples for ambitious targets set by IZA member companies usually distinguish between short-, medium and long-term targets. Seven companies committed to carbon neutrality by 2050.
In the case of zinc smelters, many of which produce SHG zinc through electrolysis, achieving carbon neutrality heavily depends on the country’s energy mix and on the ability to replace fossil fuel-based energy production by renewables.

The IZA Climate Change Task Force (CCTF), bringing together company representatives and experts from around the world and all levels of the zinc value chain, was established in 2021 to develop a decarbonization strategy for the whole zinc sector in 2022. The strategy aims to harmonize current GHG reporting practices and identify impact opportunities for GHG emission reductions as well as accelerators and barriers. Additionally, the CCTF aims to set goals and potential targets at sector level.

b) Increase the uptake of products that contribute sustainably to societal needs (Impact Opportunity 3)

Zinc, as a material, has a wide range of applications, from health supplements to batteries, but the most common one remains corrosion protection for steel through coatings. Coatings can be applied in many ways, including galvanising and thermal spraying, but the role of zinc remains the same: it forms a protective layer around steel, allowing it to become more durable. Zinc coatings play a key role in maintaining steel structures in buildings, infrastructure, and vehicles everywhere around us, but they also play a crucial role in renewable energy production:

- For example, offshore wind power generation requires a zinc coating to survive extreme environmental conditions and continue to provide green energy. Since zinc is used to cover all parts above the transition piece, a considerable amount of zinc is needed. An offshore wind turbine with a capacity of 10 MWh generally contains around four tonnes of zinc.
- Onshore wind power generators are less vulnerable to corrosion and therefore require less zinc – about 400 kg for a 10 MWh capacity turbine.
- Zinc coatings also play a key role in solar power generation by protecting solar panel fixtures and preventing rust. For a solar panel park with a capacity of 100 MWh, around 240 tonnes of zinc are used.

Zinc contributes to the transition to green energy through rechargeable zinc-based batteries. There are currently six different types of zinc-based battery chemistries with different characteristics and resulting applications: nickel-zinc, zinc-ion, zinc-manganese, zinc-bromine, zinc-air, and zinc-air flow. While these six battery types have a wide range of applications, their key use in facilitating the transition to green economies relates to renewable energy storage in residential, industrial, and commercial settings. Simply put, for solar and wind power, the amount of energy produced fluctuates drastically due to natural phenomena (i.e. a lack of sun at night). Zinc-based, batteries can be used to address this issue; storing power during peak production times and discharging it when demand exceeds production capacity. While batteries are already used for such applications, the dominant

1 The transition piece is the yellow part of the wind turbine which separates the foundation from the tower and sits at water level.
chemistries rely heavily on rare materials and safety concerns remain a central element in the debate surrounding their use. Zinc batteries therefore provide a cost-effective, safe, and reliable alternative to these battery chemistries for such applications.

Although renewable energy storage is an essential use of zinc-based batteries, it is far from being the only one. Zinc batteries can provide energy storage for buildings and homes – preventing power outages – and backup power for data centres. They also have a wide variety of transport applications, particularly nickel-zinc batteries, and even for the aerospace and defence sectors. Because of this impressive range of potential uses, zinc-based batteries are forecasted to represent around 10% of the global battery market by 2030, requiring a total of 150kt of zinc per year. To promote these innovative battery chemistries, in 2020, IZA launched the Zinc Battery Initiative, bringing together eight zinc battery manufacturers at the cutting-edge of technology. The zinc battery industry currently remains at an early stage of development, but it has a bright future as a key enabler of the ecological transition, positioning zinc at the forefront of the fight against climate change.

Data Center Back-Up Power: The massive amounts of data being generated and stored each day means battery technology needs to evolve to support this crucial sector. Zinc-based batteries are among the most promising candidates to fill this responsible position.

Another way in which zinc contributes to new and sustainable technologies is corrosion protection for electric vehicles (EVs) – on average 15kg per vehicle. Galvanised steel used to be dominant material for internal combustion engine cars’ auto bodies. However, over time, regulations in the US and Europe aiming at reducing tailpipe emissions gradually pushed manufacturers to cut weight, often by favouring lighter materials. With the introduction of EVs, galvanised steel is set to make a comeback since EVs do not produce any tailpipe emissions and galvanised steel remains a stronger, cheaper, and more durable material. Furthermore, through the Galvanized Autobody Partnership Program (GAP), the zinc and steel industry joined forces to conduct research on the processing of advanced high strength steels for lightweight automobile manufacture. Through the program, optimal zinc alloys and coating techniques for different steel types to ensure corrosion protection with minimum weight addition were developed.

c) Contribute to planning for climate resilience (Impact Opportunity 4) & prolong the life of steel structures through galvanization in developing countries (Impact Opportunity 9)

Another key contribution of zinc to the UN Sustainable Development Goals is in its contribution to building climate resilient infrastructure. Since the most common application of zinc is protecting steel from corrosion through coatings, with increasingly harsh and unpredictable weather conditions, this protection is becoming increasingly important. Furthermore, zinc coated steel more generally represents a particularly resistant and durable material, making it a material of choice for critical infrastructure.
One example of zinc coated steel being used for such purposes can be found in the US, where wooden utility poles are increasingly being replaced by galvanized steel utility poles. The low maintenance, safe, and lightweight alternative is quickly gaining ground to the traditional wooden poles – now being used by over 600 of 3,100 U.S. electric utilities. Galvanized steel has proven to retain its strength and shape over many years, even in particularly harsh and corrosive environments, therefore there is minimal need for maintenance. As opposed to wood, they are also impervious to damage caused by rot, insects, or woodpeckers, thereby eliminating the need to inspect for these issues. A detailed life cycle assessment study published in 2013 found that the zinc coated poles have significant environmental benefits such as lower GHG and aerosol emissions as well as reduced impacts on endangered species’ habitats.

Zinc-coated steel also contributes to sustainable development as a cost-effective and reliant building material for housing. Recent innovation in building technology has allowed for the development of light gauge steel frame (LGSF) construction. The concept of standardized light framed residential buildings is to build more buildings in a short period with fewer resources. The light gauge steel frame is developed through a cold-formed process without the use of heat, which enables manufacturers to produce lightweight but high tensile steel sheets. The sheet surface is coated with a zinc alloy that completely covers the steel surface and seals it from the corrosive action of its environment. This results in buildings that are more solid, rigid, stronger, durable, and easier to build. As such, the system is an attractive alternative for use in landed properties, particularly in view of concerns on the depletion of timber and other natural resources.

India’s rail tracks, spanning 115,000 km, are the third largest in the world. The Indian railway network has an annual freight carrying capacity of one billion tonnes (bt) and daily passenger carrying capacity of 21 million. The economic cost due to corrosion of rails is significant. Rails have a life of 800 gross million tonnes, which works out to 12-13 years under Indian traffic conditions. Corrosion, however, reduces its life to nearly half the expected life. Galvanizing the rail tracks offers an efficient solution: galvanising will add to the cost of rail making, but the longer life compared to the rail now in use is a huge step forward in durability. In 2020, Prime Minister Narendra Modi has outlined a plan to spend about $1.5 trillion to upgrade and build infrastructure over the next five years to shore up economic growth. Galvanizing Indian rail tracks could be among the measures taken.
4. Operational impacts to people and the environment

a. Reduce the environmental footprint of mining operations (Impact Opportunity 5)

IZA represents the entire zinc value chain and where it starts is mines. Indeed, many of IZA’s full members are mining companies and while providing an essential service, mining operations do involve some level of disturbance to the environment. To minimise this disturbance, IZA member companies engage in two key activities: land rehabilitation and recycling water.

Land rehabilitation consists in bringing an area of land back to its original state, prior to mining activities, a process often involving levelling the land and planting trees. In 2019 alone, the eleven member companies reporting on this metric had rehabilitated a combined total of 193,4 km², the equivalent of about 1,311 U.S. Football fields.

In that same year, twelve IZA member companies reported a total amount of nearly 700 million cubic metres of water either reused or recycled, representing more than ten times the yearly average water consumption of the Brussels Region (68,3 million cubic metres). This number is important because mining activities require water and every drop that is recycled is a drop that will not have to be taken from other possible uses.

As insightful as land rehabilitation and water recycling metrics may be, they only address a small part of the broader environmental footprint of a given material. For this reason, IZA conducts regular Life Cycle Assessments (LCA) to feed information to downstream users and other stakeholders on the environmental footprint of zinc. Through regular surveys and Life Cycle Inventory updates from member companies, the IZA LCA for zinc mining and production represents the most comprehensive environmental profile for zinc. With increasing numbers of companies reporting on these metrics, IZA can better quantify the environmental profile of zinc through internationally recognised standards and encourage more companies to join the project. LCAs not only represents a crucial data collecting effort, but they also represent the first step in minimising zinc’s environmental footprint by targeting areas where the most work is needed.

The Glencore San Juan de Nieva zinc smelter in northern Spain represents one of the frontrunners in minimising water consumption. Through an in-depth analysis of existing processes as well as investigation of alternative processes, the smelter succeeded in reducing its water consumption by nearly 20% from 2004 to 2020, representing around 1 million m³ of water or enough water to fill 400 Olympic size swimming pools. This reduction is all the more impressive considering that during this time, the volume of zinc produced increased by 8%.

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2 In the most recent update, mines and smelters from 11 companies around the world participated in the LCA. The 18 mines represented in the LCA represent a combined yearly production of around 1,5 million metric tons of mined zinc. The 17 smelters produce around 3,5 million metric tons of SHG zinc per year.
b. Embed best practice employment principles and make a positive contribution to local communities (Impact Opportunity 6)

Although mining activities necessarily have some impact on local communities, the level and quality of impact varies widely according to the level of commitment shown by companies to ensure the wellbeing of local and indigenous communities as well as their surrounding environment. While a quantification of impacts is difficult, positive examples for mining companies making a positive difference to community life can be found among IZA membership:

One example of an IZA member company displaying real commitment to responsible mining is Boliden. Some of the company’s key exploration and mining sites, including the Boliden Area, the Aitik mine, and the Kevitsa mine, are located in northern Sweden and Finland, within reindeer herding areas and close to Sami villages. To ensure minimum disturbance of the Sami communities and their lifestyles, Boliden has elected an approach of open dialogue and long-term cooperation. Through extensive and continuous stakeholder meetings and consultation, Boliden has come to agreements on cooperation, development, and compensation with Sami villages.

Another example of an IZA member company taking concrete steps to ensure a lasting positive contribution to indigenous and local communities is Teck Resources’s partnership with Indspire. This indigenous national charity has for objective to increase graduation rates of First Nations, Inuit and Metis students through support programs and financial resources. From 2019 to 2020, Indspire provided $17.8 million through more than 5,100 bursaries and scholarships to First Nations, Inuit and Métis students across Canada. Through ongoing contributions, Teck Resources is contributing to reducing students’ financial burdens, allowing them to focus on education and reach their full potential.

The zinc sector’s commitment to local communities is global. Much further south, in Brazil, Nexa Resources, in partnership with the Brazilian Development Bank, has worked through the ReDes Program to generate employment in Brazilian municipalities. The program, launched in 2010, focuses mainly on horticultural and dairy production chains, mapping these chains and working with associations to further develop existing production. The work ranges from creating business plans to investments in infrastructure and ends only when businesses have become self-sufficient.
Making a positive contribution to local communities is a key component of Lundin Mining Corporation’s approach to mining operations around the world. One example of this commitment can be found at the Zinkgruvan mine in Sweden. Through hiring 100% of its workers from Sweden and reaching 96% local procurement of goods and services, Lundin Mining ensures local communities benefit directly from the activities at Zinkgruvan. Additionally, ongoing funding of community initiatives, including local entrepreneurship programs and economic growth initiatives – based on activities other than mining – enable diversification of the local economy, addressing a key concern associated with mining: overreliance on the mine for local jobs. In 2020, the company directly invested over $270,000 in such community initiatives.

South32 is another great example of zinc producers’ commitment to make positive contributions to local communities. In South Africa and Mozambique, the Australian company has worked in partnership with local authorities and non-profits to combat drought and improve access to water for drought-affected communities. In 2018, South32 funded 1 million South African Rand for the provision and installation of 135 water tanks, which will improve water access for local communities in the uMhlathuze area.

c. Enhance gender diversity in zinc related employment (Impact Opportunity 7)

Between 2016 and 2019, the amount of IZA member companies reporting on their percentage of female employees has steadily increased, going up from 7 in 2016 to 12 in 2019.

While the average percentage of female employees for reporting IZA member companies has remained relatively stable at around 14%, individual members, such as Teck Resources, have made substantial progress. In four years, not only has Teck increased its percentage of female employees by a third – from 10 to 15% – it has also increased its percentage of female employees in senior management by 3% – from 7 to 10%. MMG, another IZA member company has reached 50.6% females in their corporate office workforce in 2020.

As an association that values gender diversity, IZA recognizes that the zinc industry still has a long way to go before reaching parity. Nevertheless, with 9 of our member companies having a policy on gender and 4 of them having set targets for addressing gender diversity, IZA remains confident in the zinc industry’s potential to improve and pave the way for the rest of the metals industry.
Environmental, social, or governance (ESG) issues in mining, including environmental degradation and violations of human rights, are of extreme concern to the zinc sector. Most of the zinc mined today, comes from well-controlled, large-scale mining operations. Nevertheless, we are conscious of the need to ensure the greatest possible level of transparency to minimise risk and provide the information to end-users, regulators, and civil society. To achieve this goal, IZA has been analysing ESG risks in zinc value chains and sensitising its member companies through the IZA Stewardship Working Group (SWG).

**d. Follow responsible sourcing principles (Impact Opportunity 8)**

In 2020, Teck Resources created a $20 million community investment fund to support COVID-19 response in communities and to provide funding for critical local initiatives and future recovery efforts. One such initiative is the Originarias program, in Chile, which received US$ 1 million in support of direct economic interventions for Indigenous women in regions where they operate.

In India, Hindustan Zinc Limited (HZL) targets gender parity with equal representation and equal opportunities across all levels. A conscious effort is being made to raise the percentage of women in their workforce – currently 15% - and particularly empower women to take on senior management roles. Sandhya Rasakatla, India’s first Woman Underground Mine Manager – now Mine Manager of Hindustan Zinc’s Baroi Mine at Zawar – represents a great example of the great female talent and excellence fostered by HZL as a result of inclusive policies.

To improve gender balance throughout the company, Hudbay Minerals adopted a top-down approach. The company revised its Diversity Policy – which aims at ensuring representation of women and designated groups among board members and senior management – to include a target for at least 30% women directors on the board. The target has now been achieved and the board is committed to continuously improve and advance diversity and inclusion across the organisation.

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IZA is actively involved in developing the Joint Due Diligence Standard for copper, nickel, lead and zinc – including their by-products (link). This standard is available for all zinc producing companies and will allow them to comply with the London Metals Exchange (LME) Responsible Sourcing Requirements. The Joint Due Diligence Standard is aligned with the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (OECD Guidance). It is currently undergoing OECD alignment assessment and LME recognition procedures. The Joint Due Diligence standard provides credible assurances to all relevant stakeholders.

Starting in 2022, IZA will join forces with other commodity associations to develop a broad ESG standard applicable to zinc, its by-products and other metals in close cooperation with the Copper Mark (link).

IZA is an associate member of Responsible Steel (link), a broad ESG standard that has been available to steel production sites since 2020. Given that galvanising steel remains the primary use of zinc, it is important for IZA to give input on the provisions of the standard and allow for links to be made with global zinc producers and galvanisers.

Safe management of tailings is one of the most contentious topics in mining. IZA’s members understand and recognise the need to not only ensure tailings are managed in a responsible fashion, but also to provide assurances to support these claims. In total, 13 of our mining members have publicly committed to internationally recognised standards for the safer management of tailings. These standards include the TSM Tailings Management Protocol, the Church of England’s Investor Mining and Tailings Safety Initiative, and the membership requirements by ICMM.

Since 2019, IZA is supporting member of the Dutch International Business Conduct for the Metals Sector (IRBC). The IRBC was developed by the Dutch government to promote responsible business conduct across the metals sector. Through its associate membership, IZA links the Dutch metal industry with the global zinc network, and supports them through meetings, promoting their events, and participating in stakeholder consultations.
5. Closing the loop: Accelerate and maximize the recycling potential of zinc containing materials (Impact Opportunity 10)

Due to the fact zinc is mainly used to build infrastructure, global demand for zinc is intrinsically linked to economic growth. While the COVID-19 pandemic has taken its toll on the world’s economies, many developing countries are still experiencing rapid growth and, as a consequence, demand for zinc is growing. Zinc is and will remain an available resource for centuries to come. However, for the world to keep up with growing demand and to minimise impacts on environment and climate, establishing circular business models is essential for the zinc industry, just like for all other raw material sectors.

To determine the current level of progress in establishing circular models, in 2021, IZA – in partnership with Fraunhofer Institute ISI – conducted an update to the first zinc stocks and flows (STAF) analysis done by Yale University for 2010 with encouraging results: In less than ten years – from 2010 to 2018 – zinc recycling has doubled, partly as a result of increased regulations and enforcement to promote EAF dust recycling in Europe, North America, and China. In addition, about 241 million tonnes of zinc are currently in use and will become available for recycling in the future.

In 2022, the zinc STAF will undergo regionalisation by introducing trade flows for the regions of Europe, North America (including Mexico), Latin America, China, the rest of Asia (including India), and the rest of the world. This process will enable the further identification of impact opportunities to close zinc loops and for IZA to provide targeted support to individual regions.
6. Conclusions

In the first year following the launch of the SDG Roadmap for the Global Zinc Sector, IZA focused on stakeholder interaction to understand if the identified impact opportunities meet expectations and needs. Feedback from downstream users, NGOs, and other organizations confirmed that the overall objective was met and provided input to specific actions aiming at efficiently using of the impact opportunities identified in the Roadmap.

To measure impact and progress, baselines for each of the impact opportunities were defined. While quantitative sustainability indicators would have been ideal, it turned out to be very difficult and, in some cases impossible, to find credible information that could be used for this purpose. IZA member companies do report on these metrics (e.g. on GHG emissions and on women among their workforce), but not all member companies do. Additionally, those that do often use slightly different methodologies. Where quantitative reporting was not possible, best practice examples and case studies were used.

Starting from these baselines, in 2022 and subsequent years, IZA and member companies will work towards further increasing the sector’s contributions to the SDGs in a targeted and focused manner. Harmonizing reporting practices is an integral part of the 2022 workplan. Three impact opportunities specifically call for increased interaction along the whole zinc value chain: climate action, circularity, and responsible sourcing.

To measure progress more quantitatively in the coming years, harmonized reporting of selected sustainability indicators by IZA member companies can be considered. Examples can be found in other metals sectors such as steel and aluminium.

Three impact opportunities specifically call for increased interaction along the whole zinc value chain: climate action, circularity, and responsible sourcing. All three will form the guiding star for IZA in 2022.