Annual Report 2021

Empowering the future

ZINC international zinc association
With the world and industry experiencing the impacts from Covid-19, 2021 proved to be a challenging yet productive year for IZA and significant progress was made on many fronts. Our standing goal is to add value to our members by developing and maintaining sustainable, long-term markets for zinc and ensuring license to operate. We do this in three key program areas: market development, environmental health & sustainability, and communications. Despite the challenges from Covid, IZA was able to achieve numerous successes in 2021 thanks to the team’s diligence and their ability to adapt to the new circumstances.

As an advocate for the zinc industry, IZA partners with its members, governments, and other stakeholders to maximize our impact and resource leveraging. Stakeholder engagement also enables our environmental stewardship activities to be more relevant and impactful. Finding common ground and sharing expertise to solve complex issues has created a relationship of transparency and trust, with many of these partners becoming advocates for zinc and the zinc industry. IZA’s activities with Responsible Sourcing, the Climate Change Task Force, and the REACH effort are great examples of this. And while sustainability and regulatory policies will continue to shape markets, addressing them on an industry-wide and multi-stakeholder basis has minimized the potential adverse business impacts and maximized opportunities while at the same time enhancing the reputation of the zinc industry as environmentally responsible.

Partnerships also serve as a cornerstone to our market development efforts, with IZA effectively engaging stakeholders at all levels of the zinc value chain. The Galvanized Autobody Partnership, Zinc Battery Initiative, Die Casting Marketing program, and Steel Utility Pole Coalition are excellent examples. These programs represent exceptional
market potential and have attracted high cost-sharing from customers in the steel, automotive, galvanizing, die casting, and battery industries. In addition to providing unique market insight in planning and developing programs, the path to policy change or market adoption accelerated because these partners have a stake in the process.

IZA has proven to be a critical, unified voice for the zinc industry across its program areas. This ability comes from our talented and experienced staff, an excellent research network, and, equally important, vital member and stakeholder support for our initiatives. There is no question we are stronger working together versus separately - in good times, or as in the case of 2021, challenging times. I want to take this moment to thank the IZA Membership for your support and look forward to another productive year ahead.
IZA’s Environment, Health and Sustainability activities provide a platform for the zinc industry to participate in regulatory discussions providing a conduit for industry concerns and ideas to be heard by the regulatory community, ultimately resulting in a more balanced approach to environmental regulations. It also connotes corporate responsibility and serves to build public trust.

IZA benchmarking has shown a 100% increase in Zinc recycling this past decade.

IZA’s guidance and negotiation on key Regulatory actions like IMO and ETS have resulted in multi-million dollar annual savings to the zinc industry.
Member Impacts

IZA actively monitors and engages in regulatory challenges to zinc markets at the global, regional, and local levels. By utilizing the best available science and advocacy, IZA can serve an educational role with authorities on best practices for measuring and assessing zinc in the environment. Notable activities in 2021 included work with the Canadian Government to ensure a proper assessment of zinc in their Chemical Management Program; ongoing actions with California, the USEPA, and Australia/New Zealand on developing science-based water standards; and work throughout Southeast Asia monitoring Global Harmonization Regulations. Other highlights from 2021 include:

IZA continued its work with the International Maritime Organization (IMO) to ensure proper assessment of zinc through ongoing updates. Collectively, these efforts have resulted in savings of $1-2 per tonne of shipped zinc concentrate.

IZA’s coordinating of filing for compensation under the European Union CO2 Emission Trading Scheme (ETS) has been key to successfully achieving a higher compensation structure and negotiating new benchmarking for CO2, saving the zinc industry millions of dollars.

In its role as REACH Secretariat for zinc, cadmium, indium, and germanium, IZA has successfully met all required deadlines for compliance. The IZA REACH team is also preparing for the potential inclusion of Pb and Cd in the 11th Priority list for Authorization with potential wide-ranging impacts on other metals, including zinc.

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Working with other groups to leverage our impact, IZA was able to provide scientific data and information to the UN Minamata Mercury Expert Group which resulted in a favorable outcome where zinc mine tailings were not classified as mercury wastes under the Minamata Convention.

IZA continues to educate EU Member States on the best way to measure zinc in waters and has so far been successful in keeping zinc out of the spotlight and off the prioritization list of chemicals under the Water Framework Directive, mitigating significant zinc product market implications.
IZA promotes awareness of zinc’s essentiality and critical role in human health. As part of this effort, IZA helped build a multiple-stakeholder partnership focused on researching connections between zinc deficiency and autism diagnosis. IZA also works with the International Zinc Nutrition Consultative Group (IZiNCG) to assess the efficacy and effectiveness of zinc fortification interventions. Finally, IZA continues to develop opportunities to work with Members to expand its long-running and impactful Zinc Saves Kids partnership with UNICEF.
Sustainability

Increasingly, specifiers and design groups use sustainability information to select specific metals or materials in manufacturing and construction. Likewise, government authorities now consider sustainability attributes such as carbon footprints, responsible sourcing, recycling, and resource efficiency when developing regulatory measures. Investors, shareholders, and the financial sector have also made sustainability indicators key for investments and ratings. IZA’s sustainability program aims to position zinc as a material of choice for such groups by highlighting zinc’s contributions to economic, environmental, and social progress. The program aligns with the three pillars of Climate Action, Circularity, and Responsibility.

Member companies’ experts are involved in IZA’s sustainability programs via the Stewardship Working Group. The SWG includes 90 Member representatives and met five times in 2021 to exchange views on IZA’s programs and strategies.

Climate Action

IZA completed a Global Lifecycle Assessment (LCA) update. Last done in 2012, this 2021 update provided high-quality global average SHG zinc production data that was submitted to relevant LCA data providers. The update includes the zinc-carbon footprint (GWP) and, for the first time, the zinc water footprint.

The IZA Climate Change Task Force launched this year, representing 14 member companies and two organizations. The goal of this Task Force is to prioritize and implement a zinc sector climate action strategy. This group will drive the development of a Decarbonization Roadmap for the global zinc industry.

Circularity

IZA engaged the Fraunhofer ISI Institute to update global averages of zinc stocks and flows to build an understanding of zinc flows in a complete lifecycle process of zinc as a stand-alone substance. This project also provides information on zinc recycling today, future recycling potentials, and 2050 zinc supply and demand scenarios.
With steel continuing to be the material of choice for electric vehicles, IZA’s Galvanized Autobody Partnership (GAP) is addressing lightweighting, process improvements, and addressing safety requirements unique to EVs. The location and size of larger battery packs have reduced the available area previously relied on to absorb energy that would otherwise transfer to vehicle occupants. New designs, and new demands on the materials used, are required.
Creative Strategies to Grow, Adapt and Defend Zinc Markets

Coatings to protect steel from corrosion represent nearly 60% of the market for zinc, and yet only 6% of steel produced annually is coated. Given the tremendous opportunity to expand zinc consumption in this sector, coatings are the main focus of IZA’s market development activities. Our work runs the gamut from competitive defense of existing applications to creating entirely new applications.

Infrastructure

IZA continued its program to position thermal sprayed zinc (TSZ) - alongside galvanizing and zinc-rich paint as sustainable, recyclable, and cost-efficient ways of protecting concrete bridges and steel structures from premature failure due to corrosion.

Aging highways and bridges across Europe and North America and several unfortunate, high-profile failures have spotlighted the need for better corrosion prevention efforts. As a result, numerous governments have passed or proposed significant investments in infrastructure to stimulate post-pandemic recovery, which has created a considerable market opportunity for zinc coatings.

IZA made excellent progress in 2021 with its strategy of working directly with national, regional and local authorities to introduce the various options in zinc-based corrosion protection systems. This approach of catering to the specific projects and needs of the local and regional jurisdictions led to a number of notable projects specifying zinc coatings in Belgium, Denmark, Germany, the United States and elsewhere.

Growth Opportunities

Another area of focus is to identify and target specific applications where zinc coatings are a logical fit, but market penetration remains low. Two such projects underway in 2021 involved converting wood and concrete utility poles to galvanized steel, and promoting the use of galvanized rebar in bridge decks and other infrastructure.
Energy storage represents a tremendous opportunity for the zinc industry. The biggest challenge for further developing this market is overcoming the lack of knowledge for chemistries other than Li-ion. IZA’s Zinc Battery Initiative has become a leading advocate in raising awareness through coverage with news outlets and our social media channels.

In addition to promoting zinc battery chemistries as an innovative, safe, and cost-efficient solution for energy storage, the group has been looking into ways of recycling zinc batteries, an increasingly important aspect as the technology gains momentum.

The energy storage market is projected to consume 150kt of zinc by 2030.
IZA's die casting market development effort continues to receive strong support from the zinc die casting industry, with 20 leading die casting companies participating in this year's program.

The core of this initiative is a series of marketing videos highlighting the advantages of zinc die casting alloys in specific end-use applications. Two webinars were also held targeting specifiers, designers, and end-users in the automotive and mechanical engineering industry.

2021 also marked the 20th anniversary of the Zinc Challenge, a design competition for industrial design students. Each year the competition has a different theme and challenges participating students to create a relevant part using a zinc alloy. The top three winners and their faculty are awarded a prize. Thirty-one submissions were received this year.
IZA’s Zinc Nutrient Initiative is a program with strong Regional influence. Successful work with the zinc fertilizer market continued with partnerships in China, India, Mexico, Brazil and Bangladesh, driving an additional expansion of zinc usage for food and nutrition security. Of particular note was a collaboration with the World Bank in India that showed significant beneficial impacts of using zinc fertilizers.
**INDIA**

Additional Continuous Galvanized Rebar capacity came online in 2021, and a pilot demonstration line to thermally spray zinc on railway tracks. Significant progress developing new Hot Dip Galvanizing (HDG) market opportunities continued, along with increased uptake of galvanized steel in the Indian automotive market. A Zinc Die Casting Knowledge and Expert Center was also launched and significant media and communications promotions undertaken.

**LATIN AMERICA**

2021 saw significant opportunity and success in promoting HDG for infrastructure, rail, bridges, energy projects, and the agricultural sector throughout the Region. Special promotional projects focused on HDG applications in Brazil’s sanitation, wastewater management, and solar energy sectors. And in Mexico, there was added emphasis on zinc fertilizers and using galvanic anodes to protect submerged metal structures and zinc-based protection methods for concrete structures.

**CHINA**

IZA’s Galvanized Autobody Partnership continues to accelerate conversion to galvanized steel in the Chinese automotive industry. China was an early adopter of CGR, and production capacity expanded in 2021. Specification of HDG steel for scaffolding products for the construction sector also boosted the market. IZA sponsored the 6th International Hot Dip Galvanizing Symposium along with supporting the China Die Casting Conference & Exhibition.

**AFRICA**

IZA seeks to maintain (and develop) zinc usage in Africa by focusing on hot-dip galvanizing in mining, infrastructure, and construction. 2021 saw a continued media campaign to raise awareness of zinc in the engineering, health, nutrition, and agriculture sectors, and zinc as a sustainable material.

**ASIA PACIFIC**

Asia-Pacific activities for 2021 focused mainly on developing HDG and other zinc coating markets through standards, training, and technology transfer. High growth opportunities exist, especially in Indonesia, Malaysia, Thailand, and Vietnam, where the program focuses on growing applications for general galvanizing via seminars and galvanizer training. Several high profile conferences planned for 2021, including the Asia Zinc Metal Roundtable, were rescheduled for 2022 due to Covid.

With the help of IZAs ZNI Program, the fertilizer market has grown from 70k to over 400k tons of annual zinc consumption.
Communications and Technical Services

Print and Digital Documents
IZA produces a variety of print and digital publications and videos that illustrate the versatility of zinc along with reference and technical information covering most zinc applications. IZA also publishes a newsletter highlighting market and program developments.

Websites
IZA maintains a public information hub on the web in support of zinc and IZA programs. The flagship site www.zinc.org is aimed at introducing the public to the many uses and benefits of zinc. IZA also maintains a series of technical microsites with specifications and engineering data on galvanized rebar, thermal spray, diecasting, and batteries, among others.

Conferences
Meetings, seminars and the biennial Zinc College organized or sponsored by IZA contribute to networking opportunities and improved expertise and efficiency in our Members - and often their customers - businesses. IZA’s conferences also generate revenue that is reinvested in programs.
Technical Services
IZA’s GalvInfo Center offers technical advice on the manufacturing, performance, design and use of the zinc-coated steel sheet. GalvInfo Notes have been translated and distributed globally through IZA’s regional network and technical seminars are held annually. IZA provides a similar service for diecasters along with design seminars and a design competition.

Social Media and Outreach
IZA has built a diversified communications network of Government Agencies, NGOs, sector associations and downstream users with shared interests in promoting the benefits and value of zinc. In addition to significantly extending media reach, these partners serve as allies in championing positive zinc messages.

IZA Social Media Followers **Increased by 50% in 2021** across LinkedIn, Twitter, Instagram + WeChat
CONTACT

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