Sustainability Trends for Zinc: Responsible Sourcing

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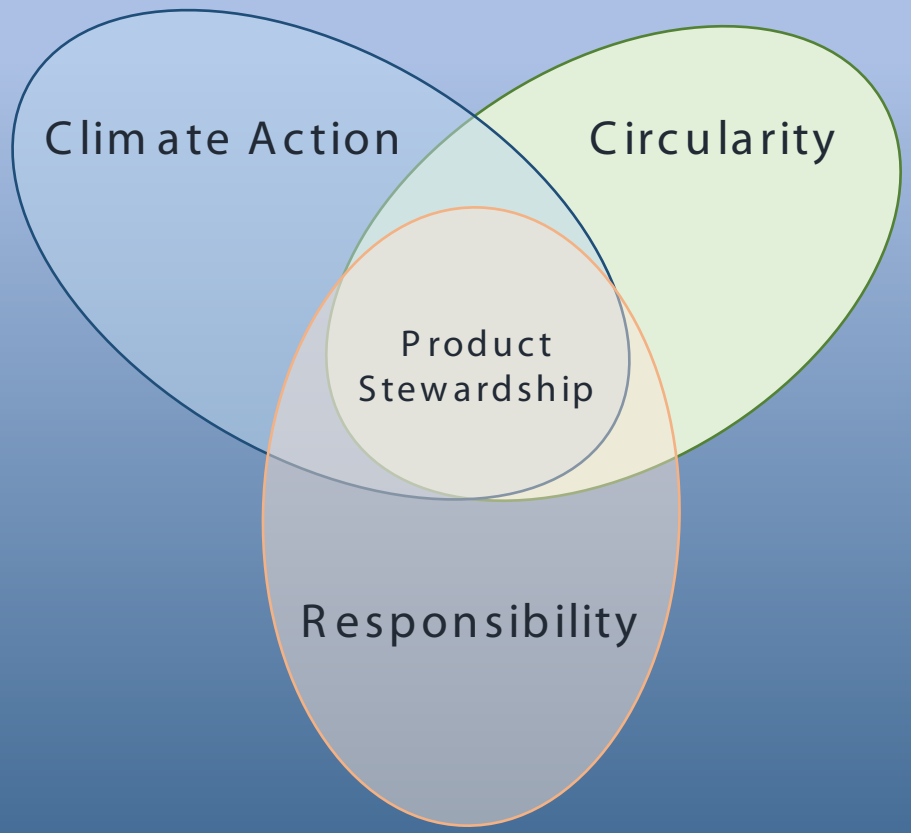
ZINC | international zinc association



Overview

- Emergence of Responsible Sourcing initiatives
- IZA Sustainability Activities

Responsible Sourcing Defined

Environment

- **Water emissions benchmarks**
- **Air emissions benchmarks**

Social

- **Occupational health and safety**
- **Corporate Social Responsibility**

Governance

- **Risk Management**
- **Structure and Transparency**
- **Mitigation**

Emerging Demands for Full ESG Accreditation

- **Financial Sector**
  - Finance
  - Investors
  - Ratings
- **Regulatory Environment**
  - Conflict Minerals
  - National Regulations
  - EU Green Deal
- **Users' and End-Product Demands**

ESG Standard for Steel

Site meets all 12 principles of ResponsibleSteel, launched in 2021

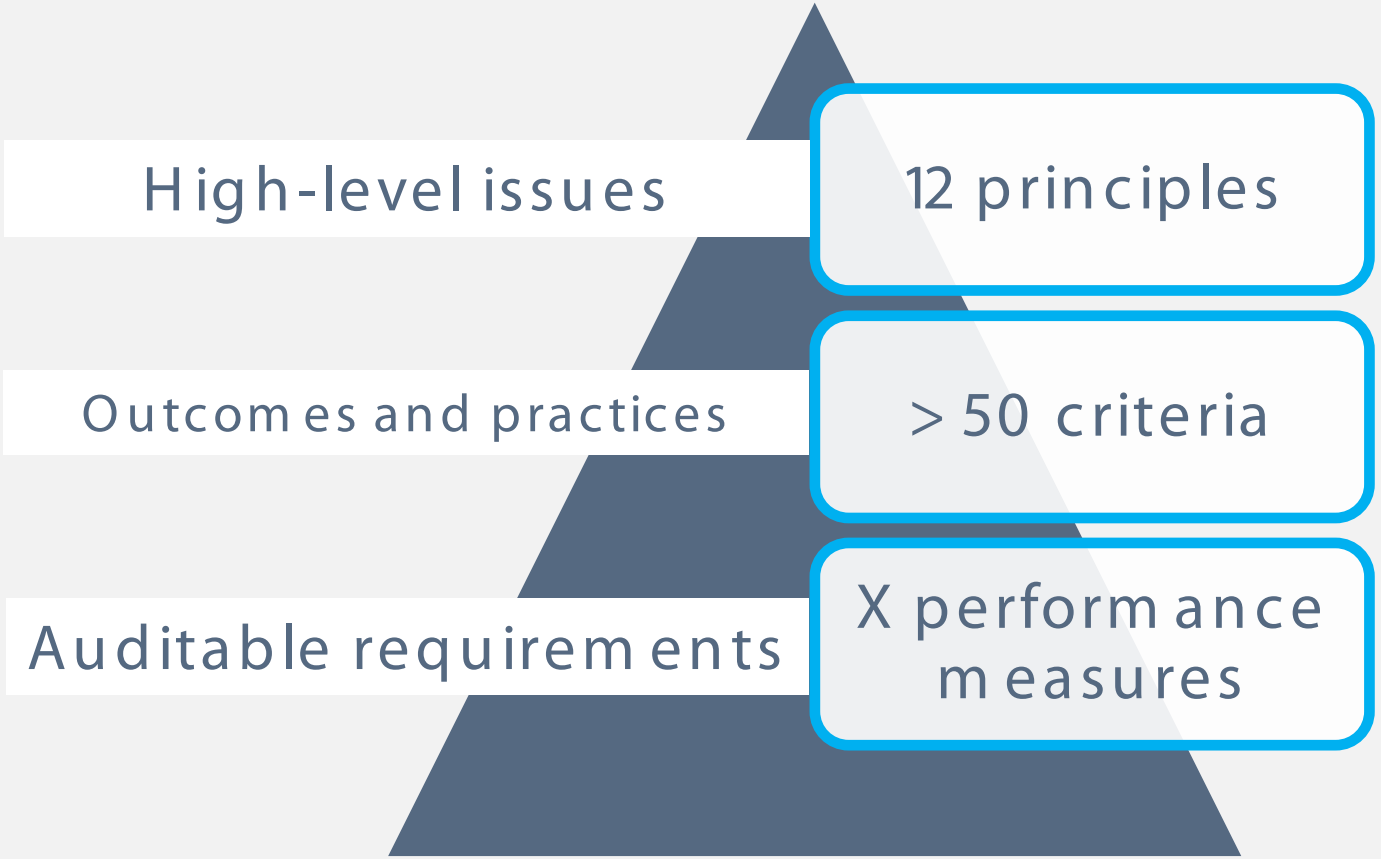
As above plus additional requirements for responsibly sourced raw materials and GHG emissions intensity, will be launched in 2022

- **ResponsibleSteel is the industry's first global multi-stakeholder standard and certification program.**
- **Requires compliance with an ESG standard for "Input Materials" for ResponsibleSteel product certification**

ResponsibleSteel Members

- 44 Company members: steel producers, automotive industry
- 11 Civil society members: NGOs
- 59 Associate members, e.g., IZA

ResponsibleSteel Standard



Principles:

1. Corporate leadership
2. ESG management systems
3. Occupational health & safety
4. Labor rights
5. Human rights
6. Stakeholder Engagement, communication
7. Local Communities
8. Climate change and GHG emissions
9. Noise, emissions, effluents and waste
10. Water stewardship
11. Biodiversity
12. Decommissioning and closure

Complying with LME Requirements: Joint Due Diligence Standard*

DD Standard, FAQ, tools, videos:
[Joint Due Diligence Standard - The Copper Mark]

- 100% OECD Aligned
- LME: Conditionally approved Track A standard
- Final approval before 30 June 2022

* for copper, nickel, lead, and zinc and their by-products

LME broadens the Scope: LMEpassport

LMEpassport taxonomy and go-live sustainability disclosures *

Environmental

- IAI's Good Practice Guidance for Calculation of Carbon Footprints
- Emissions reporting aligned with Greenhouse Gas Protocol (scopes 1, 2 and 3)
- ISO 14001 – Environmental management systems
- LME secondary materials attestation (under LME Responsible Sourcing requirements)

Social

- ISO 45001 – Occupational health and safety management systems
- LME Responsible Sourcing requirements
- Joint Due Diligence Standard for Copper, Lead, Nickel and Zinc (Copper Mark Assurance Framework)
- Cobalt Refiner Due Diligence Standard (RMI)
- Responsible Minerals Assurance Process, Tin and Tantalum Standard (RMI)

Multi-Dimensional

- Copper Mark (full standard)
- Tin Code (ITA)
- RMI ESG Standard for Mineral Supply Chains
- ICMM – Membership
- RMI – Smelter and Refiner Risk Readiness Assessment

Link

* LMEpassport went live on 31 August

Harmonized ESG Standard Needed

Developing a Responsible "Metals Mark"

THE COPPER MARK | RESPONSIBLY PRODUCED COPPER

RESPONSIBLE MINERALS INITIATIVE

- **Cooperation**
  - Copper Mark framework
  - IZA, Nickel Institute
  - MOU between IZA and RMI for additional resources considered
- **Comprehensive**
  - Full ESG coverage
  - Full Value-Chain (Chain of Custody)
  - Cu, Ni, Zn and co-products
- **Development in 2022/2023**

The Full Scope of Responsibility

1. Legal compliance
2. Business integrity
3. Stakeholder engagement
4. Business relationships
5. Child labor
6. Forced labor
7. Freedom of association, collective bargaining
8. Discrimination and harassment
9. Gender equality
10. Working hours
11. Remuneration
12. Occupational health and safety
13. Employee grievance mechanism
14. Environmental risk management
15. GHG emissions
16. Energy consumption
17. Freshwater management and conservation
18. Waste management
19. Tailings management
20. Pollution
21. Biodiversity and protected areas
22. Mine closure and reclamation
23. Community health and safety
24. Community development
25. Artisanal and small-scale mining (ASM)
26. Human rights
27. Security and human rights
28. Indigenous peoples' rights
29. Land acquisition and resettlement
30. Cultural heritage
31. Due Diligence in mineral supply chains
32. Transparency and disclosure

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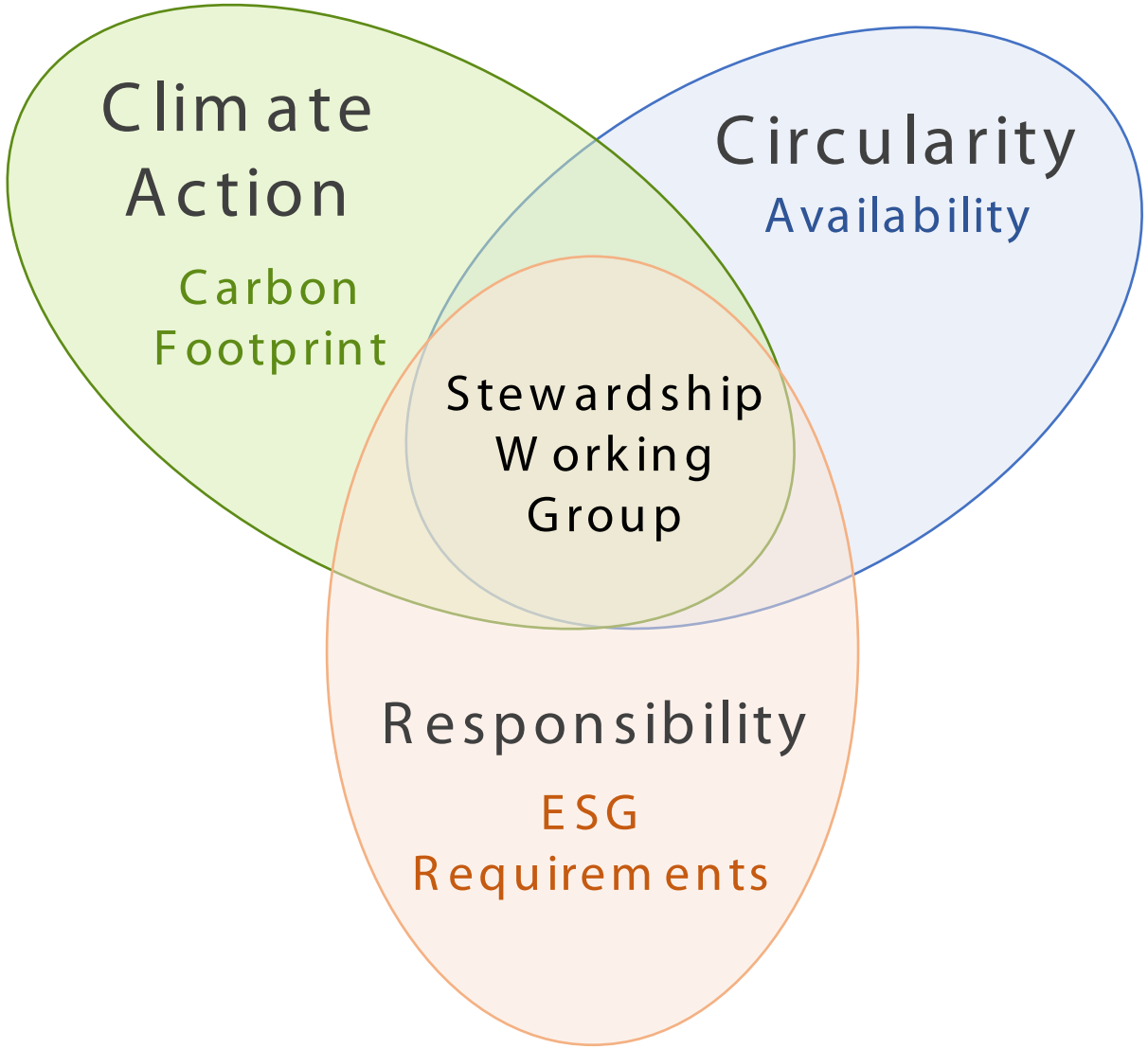
IZA Sustainable Development Program



Cooperation with Fraunhofer ISI

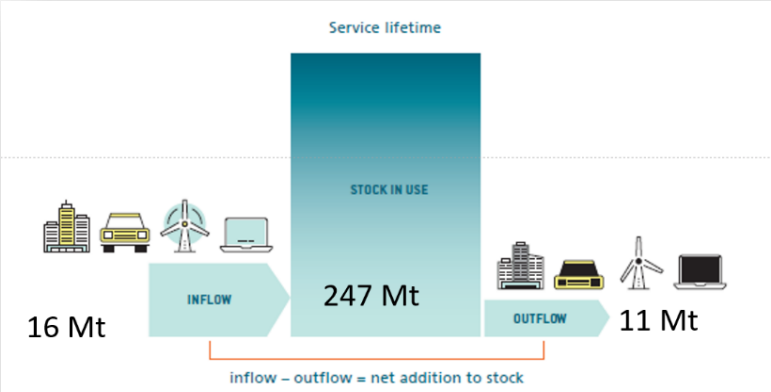


Figure 2: The urban zinc mine: In 2019, about 247 million tons (Mt) of zinc were in use that will become available for recycling in the future.

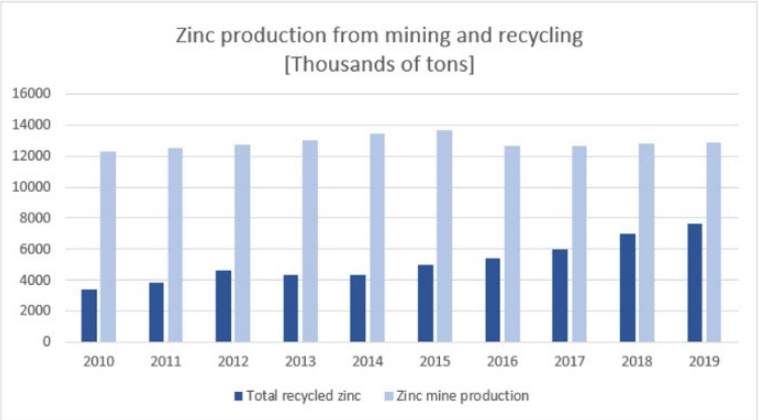


Figure 3: Zinc recycling increases: zinc production from recycled sources has doubled over between 2010 and 2019 while zinc production from mined ore has remained almost constant.

- **Global zinc stocks and flows (STAF) model, currently with a data base up to 2019, regular updates**

- **Regional (STAF) models in 2022/2023**

The Scientific Background Paper

Resources, Conservation & Recycling 180 (2022) 106154

Contents lists available at ScienceDirect

Resources, Conservation & Recycling

journal homepage: www.elsevier.com/locate/resconrec

A dynamic material flow analysis of the global anthropogenic zinc cycle: Providing a quantitative basis for circularity discussions

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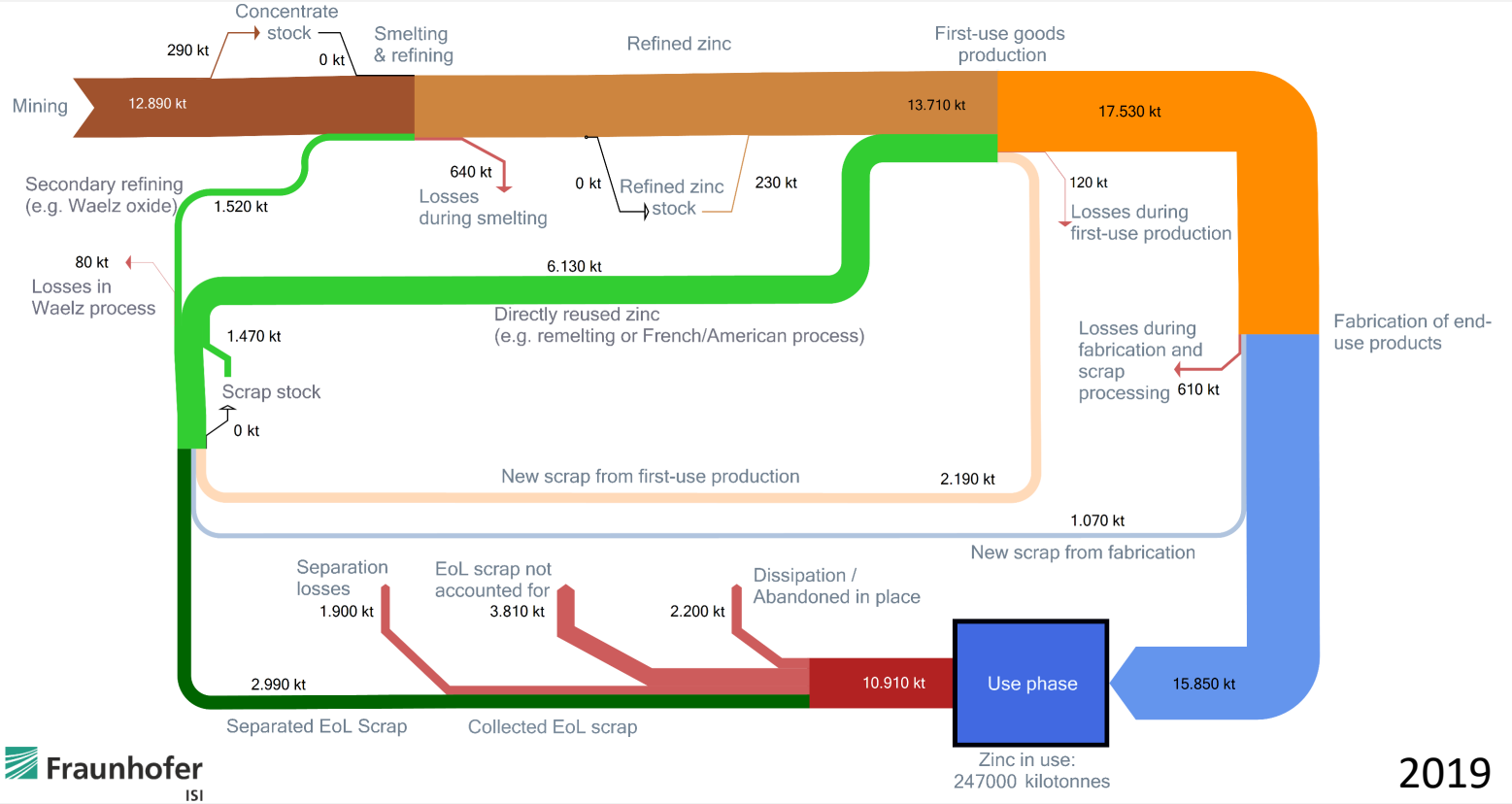
ARTICLE INFO

Keywords:
Stock and flow modeling

ABSTRACT

Accurate and up-to-date accounting of material stocks and flows is an important quantitative basis for current Circular Economy discussions. Herein, we describe the application of dynamic material flow analysis to model

A dynamic material flow analysis of the global anthropogenic zinc cycle: Providing a quantitative basis for circularity discussions - ScienceDirect



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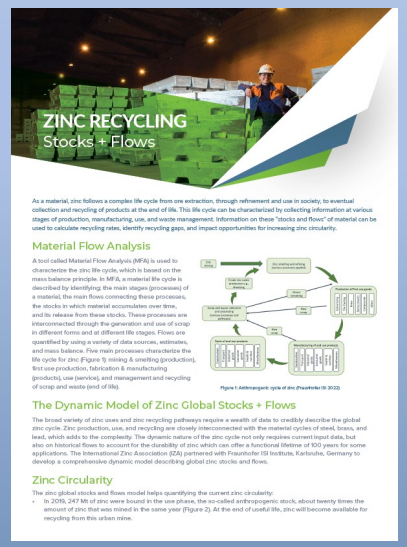
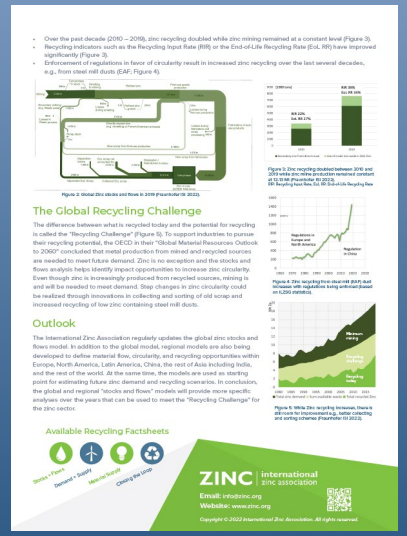
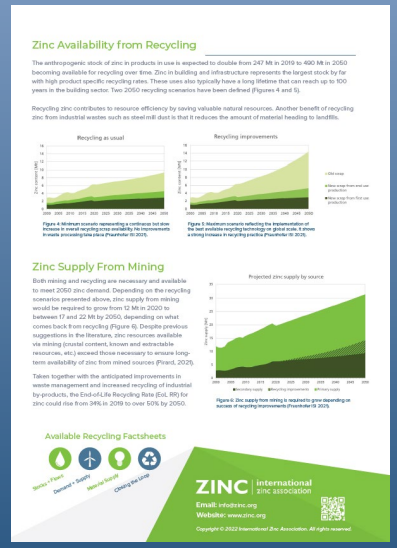
New IZA Fact Sheets

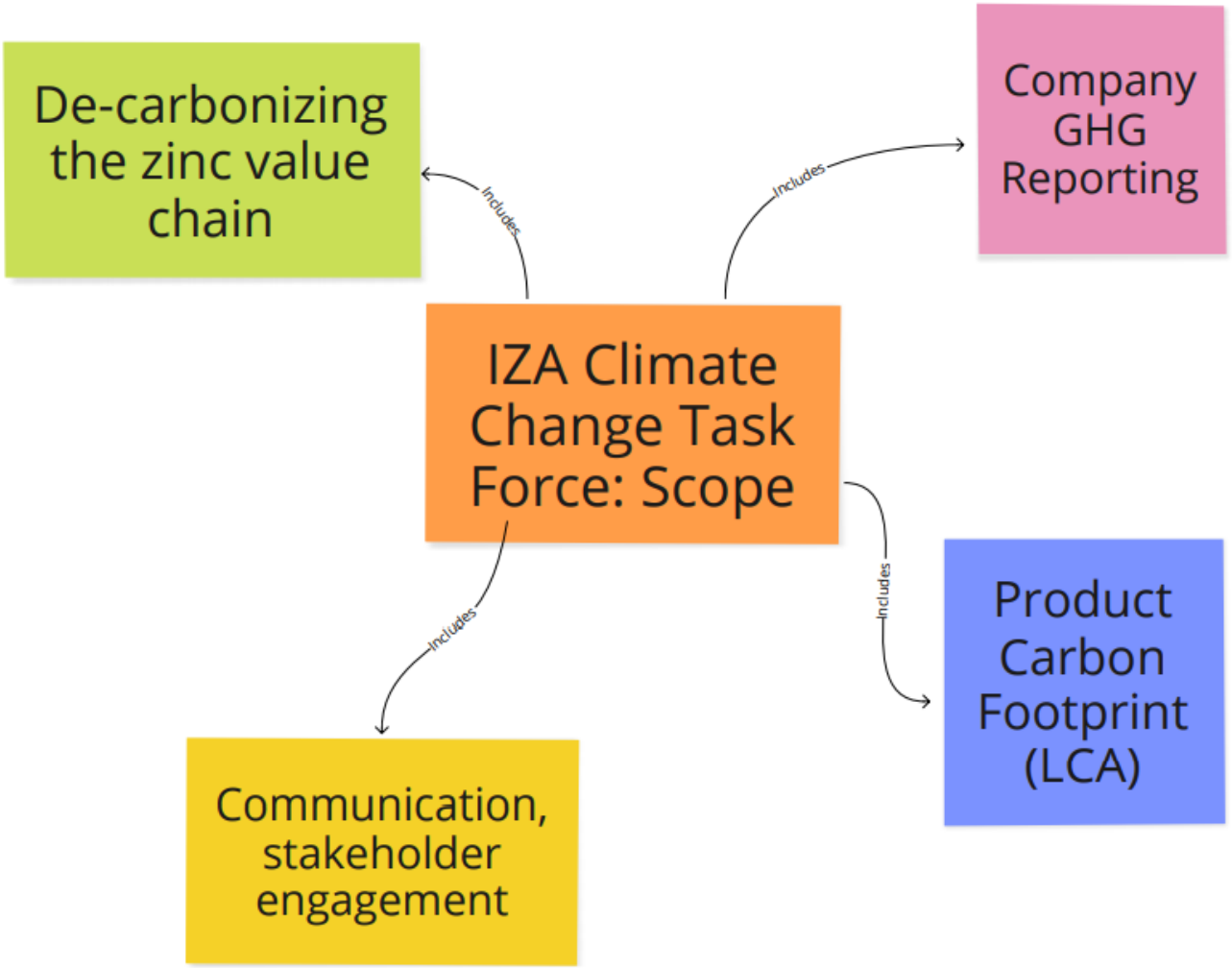






Stocks + Flows | **Closing the Loop** | **Material Supply** | **2050 Demand + Supply**

IZA Climate Change Task Force: Scope



Life Cycle Assessment for Zinc

- Regulators
- Downstream- and end-users
- Product Designers and Architects

- Increasingly used for target setting in regulations.
- Designers decide on materials by using LCA data and methodologies
- Relevant LCA impact categories cover e.g. toxicity and ecotoxicity, resource use (ADP), water footprint and product carbon footprint (GWP).

High quality and up to date are key for market access

SDG Roadmap: Impact Opportunities (link)

Progress Update: Achievements (link)

SDG Roadmap for the Global Zinc Sector

- **2020** **SDG Roadmap launched, Stakeholder interaction**
- **2021** **SDG Roadmap Progress Update launched**

One major outcome of this project was that a broad commitment to the principles of responsible sourcing leads to manifold contributions to the UN SDGs.

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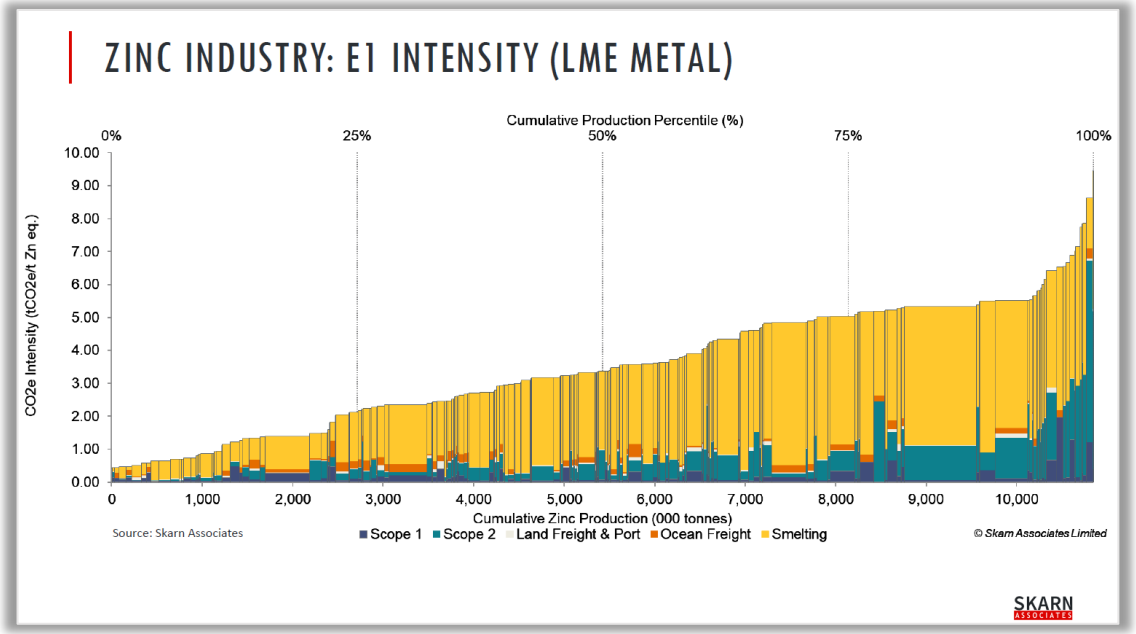
2022 Focus: Decarbonizing the Zinc Industry

- Define the baseline definition: current carbon footprint of the global zinc industry
- Identify key impact opportunities aiming at GHG emission reduction, barriers, and accelerators
- Involve stakeholders and downstream users
- Agree on medium and long-term steps



Summary

- Responsible Sourcing has become a requisite for base metals/alloys including zinc and steel

- Cooperation among partner associations, NGOs, and companies focused on efficient “Joint” standards for use across the metals and mining sector.

- Increasing attention on development of the zinc sector climate agenda & decarbonization

Questions?

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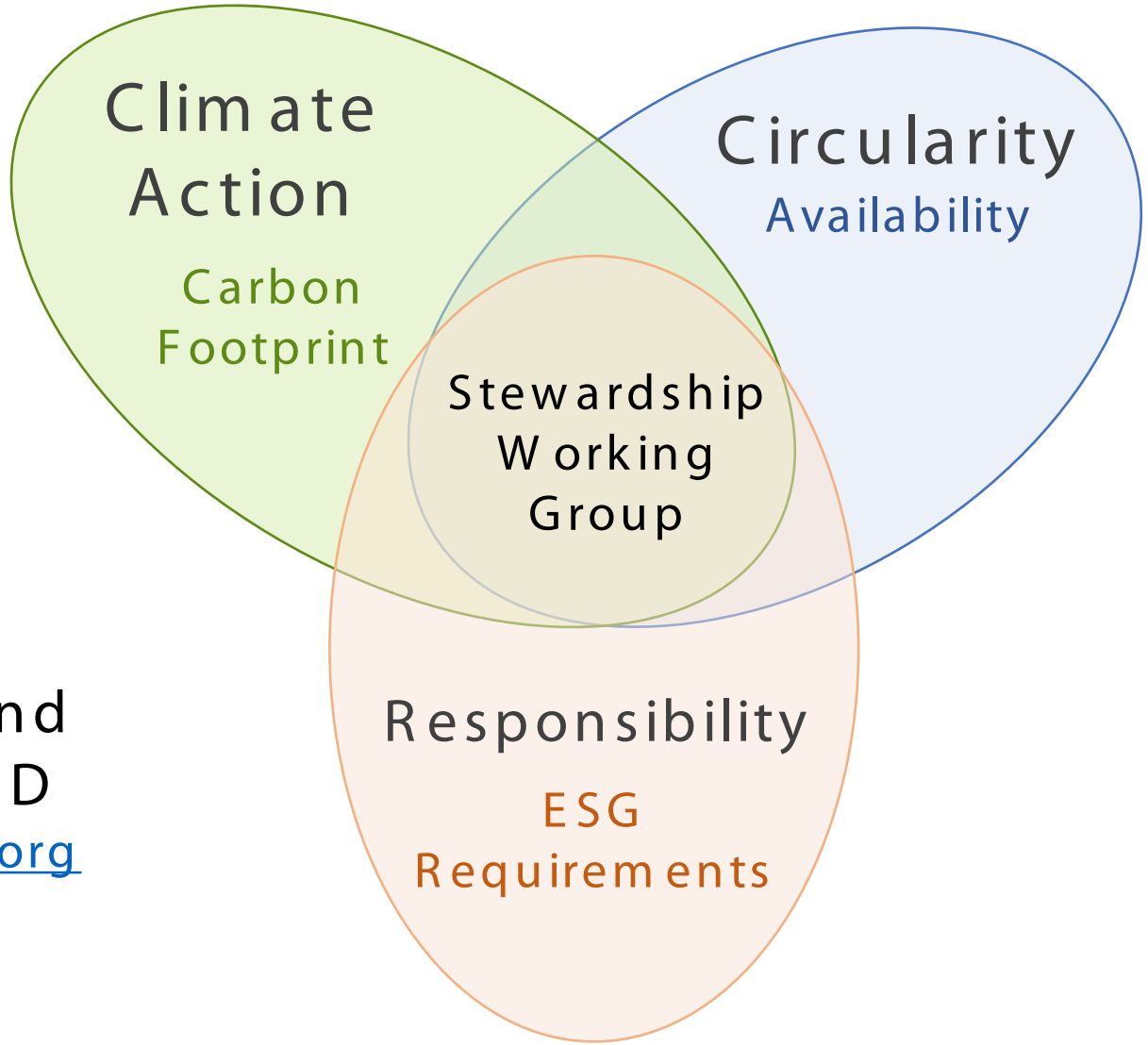
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