

*COP25 – Side Event: Acceleration of innovation for reducing CO<sub>2</sub> emissions* 

# **Exploring the Prospects of a**Steel Sector Decarbonization Club

13 December 2019

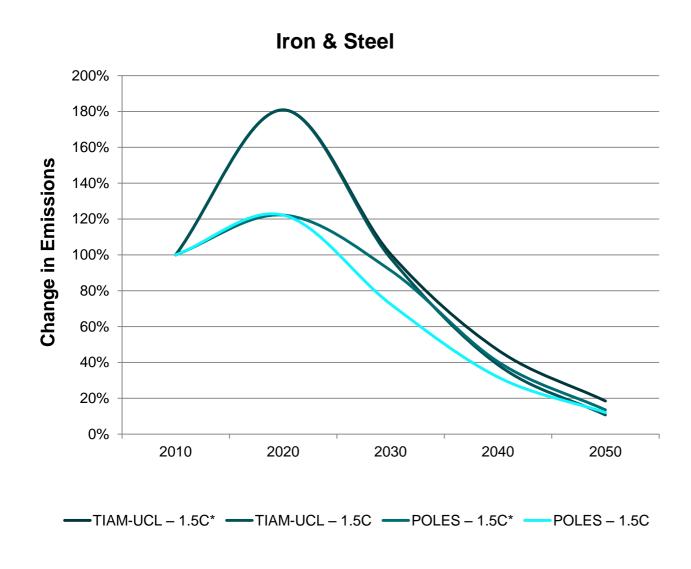
Lukas Hermwille





### **Background**





### **Challenges:**

- > Strong demand in the future
- Current overcapacities
- > Global commodity
- No mature zeroemission technologies

### **Decarbonization Options**

- Circularity
- Material efficiency
- Zero-emission primary steel

### **Transformation Challenges**



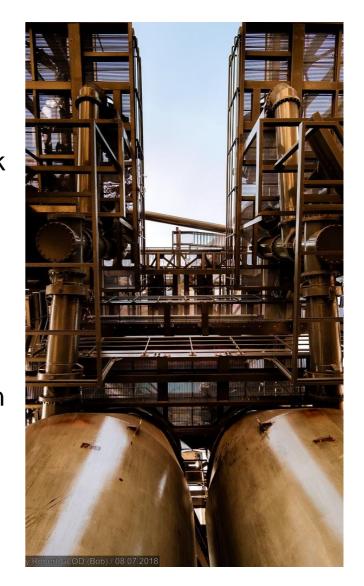
- > Lack of decarbonized technologies
- > Technological inertia and R&D mismatch
- High CAPEX and technology risk of new breakthrough process technologies
- > Competitiveness concern



### Why Global Governance?

- Signal: decarbonization roadmap to guide investment
- > Rules & Standards: global commodity with high risk of carbon leakage; labelling
- Transparency & Accountability: monitoring of emissions to enable and support cooperation
- Means of Implementation: need for technology transfer and financial Mol esp. in Africa
- ➤ Knowledge & Learning: coordinated R&D, diffusion of technical knowledge

### ALMOST COMPLETE DEARTH OF INTERNATIONAL GOVERNANCE!



#### What is a Transnational Decarbonization Club?



#### **DEFINITION:**

We define a transnational decarbonization club as a limited grouping

- > that comprises at least three country, non-state, or subnational actors from more than one country as members;
- > that is formalised in terms of membership, dues, regular meetings, and tracking action;
- that delivers a club good or benefit (exclusively) to its members;
- **>** and that significantly contributes to decarbonisation.

### **Addressing 3 Kinds of Uncertainty**





### **Key Features of a Steel Sector Decarbonization Club**



### **Objectives**

- Phase out process and energy-related carbon emissions from primary steel making by 2050
- Moratorium on conventional unabated blast furnaces by 2025/30

### Club Benefits

### Innovation Component

- support development of demonstration plants through public private partnerships
- IPR Hub: enable access to sustainable technologies on predetermined conditions

### Infrastructure Component

 coordinate and facilitate build-up of hydrogen, carbon capture, and electric infrastructure for large-scale employment of breakthrough technologies

### Market Component

- establish a label for zero emission steel
- create lead market through (e.g. through public procurement)
- explore border carbon adjustments

### **Modalities**

open club with clear pathway to membership

#### Incentives to Join a Sectoral Dearbonization Club



### For corporate members

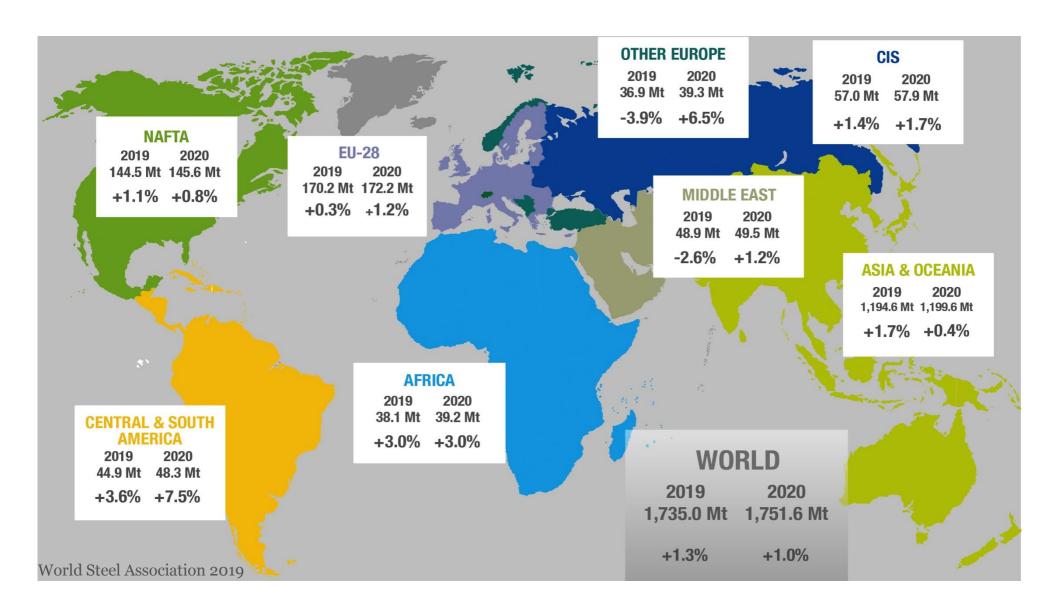
- ➤ to get (preferential) access to R&D funding, venture capital and zeroemission technologies
- to gain a competitive advantage over companies that are outside of the club
- > to shield their domestic/main market from international competition
- > to access and influence policy processes.

### For governments

- > tool to advance domestic decarbonization while maintaining industrial base
- challenge domestic industries' innovation capacities
- support its domestic industries in their innovation efforts through targeted R&D
- > improve leverage of subnational governments vs. multinational corporations
- improve terms in intra-company competition for investments

#### Where to Start?







## Thank You For Your Attention

## for questions get in touch with lukas.hermwille@wupperinst.org

#### **Photo Credits:**

Slide 4: by Robert GLOD (Bob), "Fête Des Hauts Fourneaux - Views from the Esch-Belval 'B' blast furnace", CC BY-NC-ND 2.0, https://www.flickr.com/photos/132881542@No7/39950239683

Slide 6: Capitol: by Pierre-Selim, Capitol, CC BY-SA 2.0, https://www.flickr.com/photos/pierre-selim/7555375146/
Port: by World Bank Photo Collection, Port of Rades, CC BY-NC-ND 2.0, https://www.flickr.com/photos/worldbank/4941591883
Industry: by Martijn Nijenhuis, Heavy Industry, CC BY-ND 2.0, https://www.flickr.com/photos/19219916@N08/19335560345

